THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—39TH YEAR SYDNEY, SATURDAY, SEPTEMBER 13, 1952 No. 11

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The Henry Simpson Newland Oration.[1]

By SIR VICTOR HURLEY, K.B.E.,
Melbourne.

I AM deeply conscious of the honour of delivering the first Henry Simpson Newland Oration. After Sir Henry Newland resigned the office of President of the Federal Council of the British Medical Association in Australia, which he had held for the sixteen years since its inception, the Federal Council decided in January, 1950, to commemorate his long and valuable services to the medical profession and to the community. A fund was therefore established for a Henry Simpson Newland Oration to be delivered at each session of the Australasian Medical Congress. This is the first Congress held since that date. It was also decided to award a Henry Simpson Newland Prize in Surgery for an essay on a surgical subject—the prize to be open for competition to any medical graduate of any university within the British Commonwealth of Nations. Happily Sir Henry Newland is present with us this evening.

Henry Simpson Newland was born on November 24, 1873, at High Street, Kensington, Adelaide, South Australia. He was the eldest son of the late Simpson Newland, C.M.G., who arrived with other members of his family in South Australia in June, 1839, at the age of three, with his father, the Reverend R. W. Newland, a Congregational minister. Simpson Newland played an active part in the early days of the development of South Australia, and after a lifetime of public service in various capacities died in his ninetieth year. He was a member of the South Australian Parliament for many years, and for a time was Treasurer. He was an active advocate for the building of the north-south railway on the land grant principle, but the scheme was not adopted. He also urged the development of the River Murray by locks and by water conservation for river transport and irrigation. He was manager and part owner of "Marra" Station on the Darling, and was a man of wide and varied interests. His book "Paving the Way", published in England in 1893, is a fine description of the early days at Encounter Bay, where the family had landed, and his published memoirs and writings on agriculture are valuable contributions to Australian literature. Some of his qualities have been handed down to his son, whom we honour tonight—particularly a tremendous capacity for work, a very tough physique, and an urge for public service to the community in which he worked.

Henry Simpson Newland and his four brothers received their early education by tuition by a governess (Miss Little), who died last year within a few days of her hundredth year. He then went to Saint Peter's College, Adelaide, where he won the Prankherd Scholarship. From there he entered the Medical School of the University of Adelaide, from which he graduated with first-class honours in the final examinations and shared the Everard Scholarship with Dr. Bronte Smeaton. He rowed for the University of Adelaide in 1895 and again in 1896. In the latter year Adelaide was the winning crew, and it was coached by Steve Fairbairn.

Newland graduated at the time of the famous Adelaide Hospital dispute, when it was not possible to obtain a resident appointment there. Some Adelaide medical

[1] Delivered at Melbourne on August 27, 1952.

students transferred themselves to the Universities of Melbourne and Sydney. Amongst them went the late Julian Smith and B. T. Zwar to Melbourne and Sir Charles Blackburn to Sydney.

Newland decided to go to England and entered the London Hospital Medical School, which at that time had many outstanding men on its staff—Frederick Treves, Henry Head, James Sherren, Hugh Lett, Arthur Keith, Hugh Rigby, Mansell-Moullin, Jonathan Hutchinson (junior), Leonard Hill, Robert Hutchison—a veritable galaxy of talent. Newland filled various positions on the resident staff of the hospital, and obtained the Fellowship of the Royal College of Surgeons of England in 1899. The late Sir Neville Howse, V.C., Director of Medical Services of the Australian Imperial Force in the first World War, was also on the resident staff of the hospital at the same time and had obtained his F.R.C.S. a year or two earlier.

Newland again took up rowing in London and rowed for the London Hospital in the inter-hospital boat race. Saint George's Hospital won by one and a half lengths from the London. Wilson, a member of the Saint George's crew, was later to achieve imperishable fame for his heroism and devotion to his comrades as the medical officer in Scott's Antarctic Expedition in 1912.

As a vacancy on the surgical staff of the London Hospital seemed unlikely for some time, Newland returned to Adelaide in 1902 to commence practice in partnership with the late Dr. Humphrey Marten. He also obtained the degree of Master of Surgery of Adelaide in the same year, being the first Adelaide student to gain this degree by examination.

His first appointment to the Adelaide Hospital was as honorary radiographer. X rays were then in their infancy and Newland had recognized their value in London and the possibilities of future developments in this new field. He later resigned this position when he was appointed to a vacancy on the surgical staff, and he served the Royal Adelaide Hospital and the Adelaide Children's Hospital as an honorary surgeon for many years. He also took an active part in surgical teaching in these hospitals and in the university, and was a member of the Faculty of Medicine in the University of Adelaide from 1912 to 1945.

Newland became a member of the South Australian Branch of the British Medical Association in 1902. He was elected President in 1919. In 1921 he was appointed as one of the two South Australian representatives of the then Federal Committee. In 1933 the Federal Council replaced the Federal Committee, and Newland continued as a South Australian representative. In 1923 he was appointed by the Federal Committee, together with his South Australian colleague Dr. F. S. Hone, to prepare a report on the organization of public health, and in particular a means by which the general practitioner could be brought into more active cooperation with the administrative authorities. The Hone-Newland report, as it came to be known, sets out clearly the manner in which public health services should be organized, and it is a very good example of the breadth of vision Newland had in medicine.

In 1929 he was appointed Vice-Chairman of the Federal Committee, and in September of the same year he was appointed Chairman on the death of Sir George Syme. When the Federal Council was constituted in 1933 he was made its first President, and continued to occupy the position until he resigned in March, 1949.

In 1937 he was awarded the Gold Medal of the British Medical Association in Australia—the highest honour our Association can bestow on a member. It was presented to him at the inaugural meeting of the Australasian Medical Congress (Sixth Session) at Adelaide, of which he was President. At the Annual Representative Meeting of the parent British Medical Association in 1932 (its centenary meeting) he was made a Vice-President of the British Medical Association—an honour conferred on those who have rendered distinguished service to the Association.

Earlier in the present year he resigned from the position of President of the Medical Defence Association of South Australia after twenty-five years of office, and since 1933 he has been Chairman of Directors of the British Medical Hall Company Limited.

In 1928 he received the honour of knighthood from His Majesty the King.

It was during the twenty years between 1929 and 1949, when he was Chairman of the Federal Committee, and later President of the Federal Council, that Newland rendered such outstanding service to the profession in Australia. During these years the profession was faced with many difficult problems, and its members throughout Australia had implicit confidence in his leadership. He always insisted on the vital importance of maintaining the highest professional and ethical standards, and also of professional freedom. His attitude was defined in the following extract from a letter written on June 2, 1944, to the then Commonwealth Minister of Health and Social Services:

> I have been requested to convey to you with all respect the opinion of the Federal Council that rigid adhesion to a Formulary, and all the more if enforced by contracts, violates the first great principle of medical practice, viz. that whatever the organization, the doctors taking part must remain free to direct their clinical knowledge and personal skill for the benefit of their patients in the way in which they feel to be best. The Federal Council holds that the medical profession, in the interests of the public, must retain the priceless assets of individual freedom and enterprise. On this principle the Federal Council can make no compromise.

This principle arose again in 1946, at the time of the referendum to alter the Commonwealth Constitution. Constitutional alteration bills were introduced into the House of Representatives dealing with industrial employment, organized marketing, and social services. In the first bill to give power to the Commonwealth to deal with the terms and conditions of employment in industry there were added the words "but not so as to authorize any form of civil conscription". Newland felt that unless the same words were added to the Social Services Bill members of the medical profession might be conscripted into a national medical service, which would probably be introduced if the Commonwealth were granted the powers sought in regard to social services. He acted on his own initiative as President and communicated this view to the Leader of the Opposition, who undertook to move the addition of the same words, "but not so as to authorize any form of civil conscription", to the Social Services Bill. The Minister in charge of the bill said he had pleasure in accepting the amendment, and agreed with the view that if industrial workers were entitled to be protected against civil conscription, members of the medical and dental professions were entitled to similar protection.

The insertion of this amendment was to have far-reaching consequences, because at the referendum the Commonwealth was granted powers in regard to social services, and later a *National Health Service Act* was passed, certain provisions of which seemed to the profession to contravene the provision against civil conscription. In the year following Newland's resignation as President this view was upheld in an appeal to the High Court. The medical profession in Australia was indeed fortunate in having had as their leader in such times a man who was respected by all with whom he came in contact. His honesty and sincerity of purpose were apparent in all his dealings, and he was held in equal respect by those whose views differed from his own. The work and responsibilities of the office of President of an organization embracing the whole medical profession in Australia are very exacting, and Newland brought to the office the qualities of a wide knowledge and breadth of view based on an understanding of the problems of all sections of the profession.

Newland rendered conspicuous service in both World Wars. In the first World War he left Australia in 1914 with the Australian Stationary Hospital and served with this unit and later with other units in the Middle East, France, Belgium and England. He was awarded the C.B.E. and the D.S.O. for his services. He was chiefly known as a surgical specialist at casualty clearing stations in the field, and later in plastic surgery in England. He was in charge of a special Australian unit which was attached to the

British hospital at Sidcup in Kent, which was specially equipped and staffed by British and Dominion surgeons to deal with the severe mutilating facio-maxillary wounds and injuries so frequently met with in war wounds. Other members of the Australian unit were Fay Maclure, of Melbourne, the late Kenneth Russell as dental officer, and Daryl Lindsay as artist and recorder of the histories of the patients treated and the results obtained in this specialized branch of surgery.

During the second World War, Newland and Sir John Newman-Morris were the representatives of the British Medical Association on the Central Medical Coordination Committee. This committee was set up some time before the war with the object of carrying out a survey of the medical and hospital facilities and equipment of Australia and of drawing up plans for their organization in the event of war. The work was most completely and thoroughly accomplished. It is worthy of record that the British Medical Association's representatives offered from the outset an unqualified assurance that the members of the medical profession would agree to be conscripted for service either at home or overseas in the event of war. The efficient work of this Committee, together with that of the various State Medical Coordination Committees, and also of the Medical Equipment Control Committee, under the direction of the late Sir Alan Newton, ensured that the medical services for the civilian community in Australia were carried on throughout the war with so little hardship, although one-third of the practising doctors served with the forces.

Newland was one of the founders of the Royal Australasian College of Surgeons and a member of its first Council in 1927, a position he continued to hold until 1946. He was President of the College from 1929 until 1935. In the discussions and negotiations which led to the foundation of the College it was recognized there was a need in this country for more effective arrangements for the postgraduate training of young surgeons and also to raise the standard of surgery. For a time the view was held by some (including Newland) that the desired result might be achieved by the formation of sections of surgery within the Branches of the British Medical Association. Later developments and further discussions, however, led to the almost unanimous decision by surgeons to found an Australasian College of Surgeons. The policy was, however, affirmed and has continued to be followed, that the British Medical Association, comprising as it does all branches of the profession, should be responsible for all medico-political and other matters affecting the profession as a whole. As evidence of this essential unity within the profession it is of some interest and significance that the three last presidents of the Federal Committee, or of the Federal Council of the British Medical Association in Australia, have also at some time or other been presidents of the Royal Australasian College of Surgeons.

Sir Henry Newland has also been closely associated with THE MEDICAL JOURNAL OF AUSTRALIA. He became a member of the Australasian Medical Publishing Company in 1913 and a director in 1924. On the death of Dr. T. W. Lipscomb in 1948 he was appointed Chairman of Directors—a position he still occupies. His sound practical advice has been of great value in maintaining the high standard and reputation of the Journal and in keeping its affairs on a sound business basis.

As an indication of the length of his experience one interesting matter might be referred to. In 1900, when a very recently admitted Fellow of the Royal College of Surgeons of England, he attended its centenary dinner in the Great Hall of Gray's Inn, London. Sir William MacCormac presided, and the dinner was attended by the Prince of Wales (later His Majesty King Edward VII). The Marquis of Salisbury and Lord Rosebery were amongst the principal speakers. Fifty years later, Newland attended the one-hundred-and-fiftieth anniversary dinner of the College in London; he was the only Fellow who was present at both functions.

Reference has been made only to the more important activities of Newland's career. Over a long period of years, however, he has been associated with every important medical movement in his own State of South Australia as well as in the wider Australian sphere. His vigour and capacity for work are remarkable, and until quite recently he could be found at week-ends driving a tractor and doing most of the hard physical work on his farm fifty miles from Adelaide.

His long, continued, and devoted service so freely and willingly given will serve as a guide and inspiration to those who follow him.

He still takes an active interest in medical and public affairs, and in considering on what subject I should speak to you this evening I decided to discuss present-day problems in connexion with our hospitals—a subject in which he has always been keenly interested.

THE CHANGING STATE OF HOSPITALS.

The most urgent medical problem today is the critical financial difficulties of our hospitals. The chief factors responsible for this situation, and the possible means by which they can be rectified, call for the earnest consideration of everyone. A solution must be found if they are to be enabled to continue to carry out their essential services to the community. The members of the medical profession who provide medical service in them are naturally more closely in touch with their difficulties and the reasons for them; but everyone has a vital interest in the matter. Nearly everyone nowadays is born in a hospital, and not many are so fortunate as not to require treatment in one again some time during the rest of their lives.

In this year of 1952 the Medical Society of Victoria celebrates its centenary. It may be of some interest to review briefly some of the major developments in hospitals and their management over this period, and more particularly to refer to those changes which have occurred within one's own personal experience over the last forty years. As with so many other matters, one is likely to have a clearer appreciation of probable developments in the future if one looks backwards over the happenings of the past.

Firstly, hospitals have undergone profound changes during this period because of the necessity for them to keep pace with the tremendous advances which have been made in medical and scientific knowledge. Greater advances have been made in the last fifty years than in any previous half-century in world history, and these advances have taken place not only in the purely medical field, but also in the basic sciences which have become more and more closely related to the science and practice of medicine—physics, chemistry, biochemistry, electrical science, radioactivity and, more recently, atomic energy. All these have some relation to the phenomena involved in the functioning of the body in health and in disease.

At the time of their establishment in this State, and for the next fifty years, hospital buildings and equipment and the service they gave were of a primitive character—nothing but bare necessities were provided; the wards were gloomy; the beds, furnishings, patients' clothing and food were very much of the institutional type. The medical services were inadequate and imperfectly organized, even according to the then medical standards. It was many years before properly trained nursing services were available, and specialist departments and services did not exist.

In the eighties of last century the epoch-making work of Lister revolutionized the surgical work of the hospitals. Septic infections which had previously ravaged the hospitals from time to time were practically banished, and new vistas in surgery were opened up. It then became possible to perform operations with safety and precision, and operating theatres with sterilizing equipment and trained staffs had to be provided.

The science of bacteriology was established soon afterwards and rapidly developed. It now became possible to identify, grow, and classify the bacteria and other living organisms responsible for septic and other infections. With increasing knowledge of these organisms and their behaviour, effective methods for the prevention and treatment of disease were established. Laboratories and technicians had to be provided, and their work has been

expanded year by year and is still extending as further fields are opened up.

The discovery of X rays by Röntgen in 1896 followed soon after, and before long was to revolutionize the investigation and treatment of disease in almost every region of the body. Forty years ago the whole X-ray work of the Royal Melbourne Hospital was carried out in one room by a part-time technician and an honorary radiologist who visited two or three times each week. Now the X-ray department occupies the greater part of one floor of the hospital, contains much costly equipment, and requires the services of several radiologists as well as a large number of technicians.

Year by year the work of hospitals has thus extended and proceeded apace in these and many other departments, and it can be said that the provision of adequately equipped and staffed hospitals is now an essential part of the organization of the modern State. It has also been stated that the degree of civilization of a country can be judged by the provision it makes for the proper care of its sick and weaker members unable to care for themselves. Apart altogether from any humanitarian considerations, adequate hospital provision is also a sound financial investment to any community. It is not possible, however, to show in any ordinary balance sheet the sum total of the lives saved and the sick and injured restored to useful work by the treatment given in the hospitals, but it would almost certainly be found that more value was received for the money so spent than in any other form of investment.

For many years the British Medical Association, through its Federal Council and the State Branch Councils, has consistently advised governments that the adequate provision of hospitals should have first priority in planning any national health service. This requirement is admittedly more difficult to provide than the payment of various sickness and hospital benefits, which in themselves are an excellent idea; but obviously such benefits are ineffective unless there are sufficient hospitals to accommodate people when they need treatment which can be obtained only in a hospital.

In addition to the changes brought about in hospitals by the need to keep pace with our ever-increasing knowledge, hospitals have also been profoundly affected by the far-reaching social changes which have occurred over the same period. These have taken place in other countries as well as in our own and at a greatly accelerated pace since the beginning of the present century, largely owing to the national upheaval of two world wars in the lifetimes of many of us, and also to the continuing world unrest of the troubled post-war years through which we are now passing.

The attitude towards hospitals a century ago may be judged by referring to the attempts then made to establish a public hospital in the rapidly growing community of Melbourne. In 1840, Charles Joseph Latrobe, Superintendent of Port Phillip, submitted to the Colonial Secretary in Sydney the necessity for a permanent general hospital in Melbourne, the only hospital then existing being a small one attached to the prisoners' barracks, to which were also admitted the military. He stated that common humanity had obliged him to concede admission to parties unconnected with the government, as there was no other hospital available, but these admissions were authorized only for patients who exhibited extreme danger and destitution. The Governor of New South Wales (Sir George Gipps) replied that he could not consider it the business of Government to provide a general hospital. Such institutions, he said, were properly the objects of private charity, but if public support or assistance were to be given, it should be by means of local rates. Wherever government hospitals are established, he said, a practice has grown up of admitting paupers to them free of expense; but, bad as this is in principle, it would be still worse to erect out of general funds of the government a hospital expressly for their use.

Happily we have moved a long way since those days. As a result of this correspondence, a public meeting was held in 1841 with Latrobe in the chair. A resolution was moved by Dr. Farquhar McCrae, and carried unanimously, that steps be taken to establish a public hospital in Melbourne, so designed as to admit both contributing and non-contributing patients. McCrae was well ahead of his time in this last proviso, in that it was many years before the view became more and more generally accepted that hospitals should be on the community hospital basis, in which all classes of patients are provided for—paying, part-paying or contributing, and non-paying or free. Following on this meeting a small brick cottage was rented in Little Collins Street as a temporary hospital. Later a larger two-storied house in Bourke Street West was lent by John Pascoe Fawkner, but it was not until 1848 that the first Melbourne Hospital was built in Lonsdale Street. Latrobe was its first president. The building of other hospitals followed, and their cost was met largely by contributions from the public, with some assistance from the Government.

In the earlier years of their development and up to the end of the last century there was a greater differentiation in the community between the wealthy or comparatively well-to-do sections on the one hand and the poor or necessitous on the other. The wealthier members regarded it as a responsibility to give liberally to public hospitals and other charities. Before Federation in 1901 State income tax was low, and so too were other taxes. In these days of heavier taxation and higher costs proportionately less money is available now from donations, although there are many who still contribute liberally.

Since the beginning of the century there have also been introduced old-age, invalid and other pensions, together with various social service benefits which have greatly alleviated the hardships previously borne by the less fortunately placed members of the community.

Other factors have also contributed to the general levelling up of the community which has taken place, and so the idea has gradually developed that public hospitals, which began as institutions for the sick poor and were largely maintained by the benevolent, are no longer regarded as charitable institutions, but as public utilities which all are entitled to use. The original structure of these institutions has been greatly modified, but the free service given to them by the honorary medical staffs still remains.

Teaching Hospitals.

With the establishment of medical schools in Australia some of the public hospitals in the capital cities had the responsibility added to them of providing for medical teaching. The Medical School of the University of Melbourne was the first to be established in 1863, and schools were established later in Sydney, Adelaide and Brisbane. These four medical schools now provide the training required for the great majority of the doctors practising in Australia. There is a need for additional medical schools, and plans are under discussion to establish new schools in Perth and Hobart. It is to be hoped that they will soon be provided.

Active and systematic teaching acts as a stimulus to all those who work in teaching hospitals, and their standards of investigation and treatment are thus raised, to the benefit also of the patients treated in them. They are, however, more costly because of the additional provision necessary in the way of lecture rooms, laboratories and other necessary teaching requirements. Many auxiliary medical workers also receive training in them—for example, physiotherapists, almoners, occupational therapists, social service workers, as well as various kinds of laboratory workers and technicians. Nurses, too, receive their training in most public hospitals, including, of course, the teaching ones. The position hospitals should occupy was recently stated by Lord Moran (the immediate Past-President of the Royal College of Physicians in London). He said:

> Public hospitals and particularly those which are associated with Universities as teaching hospitals, should be continuing places of medical education for all types of medical practitioners. In these hospitals, with all their facilities so readily to hand, specialist physicians and surgeons, and the specialists in the ever-

increasing specialties in medical practice are enabled to carry out the full range of modern procedures in the treatment of patients. New procedures and remedies can be used there, and by the close observation there possible, place them on a firm basis for all to use. Regular meetings for discussion form part of the work at all hospitals, and at these the members of the medical staff submit topics of interest and results of treatment. Most of these meetings are open to all members of the medical profession, and in this way they have opportunity of keeping themselves up to date and well informed in new medical developments. Their assistance is also freely welcomed as clinical assistants in the out-patients' departments.

In the development of their increasingly important work of medical teaching and research, the teaching hospitals are more and more closely related with the medical schools and the universities. Neither the universities nor the teaching hospitals are able with their present available resources to meet these steadily mounting costs if they are to keep abreast of schools elsewhere. The universities, and also the teaching hospitals, receive a considerable part of their present income from State Governments, who in their turn received grants from the Commonwealth. In any plans for a national health service by the Commonwealth Government special provision should be made for grants to medical schools and teaching hospitals. This is done in England. In the provincial medical schools and also in the teaching hospitals in London which function as medical schools, the costs of the teaching units are met by special allocations from the Universities Grants Commmission, quite apart from the grants for running the hospitals.

Although the Medical School in Melbourne was established ninety years ago, it is still without professors in medicine and surgery—the two chief subjects of the medical course.

It may therefore be said that these hospitals are now highly equipped and staffed centres for the continuing medical education of all practising doctors, and the benefits they thus receive are passed on to their patients. Such hospitals have become centres of healing, teaching and research instead of refuges for the destitute.

The position has also been well put by Dr. Malcolm McEachern, Director of Hospital Activities in the United States, who visited this State some years ago on the invitation of the Government to advise on its hospitals. He said:

> The health and death rates of a community are in direct relation to the amount of money spent intelligently on sanitation—preventive medicine—the education of doctors and others engaged in the care of the sick, and the support of medical schools and hospitals. If the people want good hospitals they must pay for them. If they want voluntary hospitals they must support them through individual gifts, through industrial donations, and through the requirements that governmental agencies assume their obligations in full. Only in this way can the flower of our hospital system—the pace-making voluntary hospital—be preserved.

Research.

Medical research is a third major responsibility of modern teaching hospitals. The large number of specialist workers on the staff and the facilities which are there so readily available for the investigations and observation of the large number of patients they treat give excellent opportunity for extending our knowledge. Many of the most valuable contributions in recent times have resulted from work done in the laboratories and special departments of hospitals. Penicillin, for example, was thus discovered and its value in combating infections placed on a sound basis. Close association between the work of the medical schools of the universities and their staffs with that done by hospital staffs in the teaching hospitals is a powerful stimulus to the work of both. Our medical schools and hospitals have perhaps not contributed as much as might have been hoped for, although we have produced many graduates who have achieved fame by their work in other schools abroad. In recent years our responsibility to add our share to the store of knowledge has been more clearly appreciated in Australia. Thus clinical research units have been established in some of our larger teaching hospitals, and they afford opportunity for more effective medical research, providing as they do for closer cooperation between the academic or scientific side and the practical or clinical aspects of medicine.

Present-Day Costs of Building and Maintaining Hospitals.

The present financial crisis in the affairs of hospitals has, however, chiefly resulted from the astronomical rises in the costs of building and of maintenance, especially in the last few years. These increased costs have arisen as a result of factors which are entirely outside the control of those responsible for their management, and are over and above the increased responsibilities now required of them.

When the Royal Melbourne Hospital was rebuilt in 1912 the estimated cost of a 400-bed modern hospital was £400 per bed, that is, a total of £160,000. Actually the final cost, as so often happens, exceeded the estimate and was rather more than £200,000. The cost of building a modern 400-bed hospital today is in the region of £3,500 per bed, and today would not be less than one and a half million pounds. Comparable increases have occurred elsewhere in Australia and in other countries.

The costs of maintenance have also similarly increased. At the same time (1912) the average cost per occupied bed was less than £4 per week. It is now more than £20 per week, and again comparable increases have occurred elsewhere in Australia and overseas. In England the costs are certainly not less than ours, and in the United States they are much greater.

So far as the public hospitals are concerned, they are unable to pass on their rising costs as is done in other fields by increasing the cost to the public of the commodity produced. They are also especially affected by increased wages and cost of living, in that they have to provide a twenty-four hour service seven days a week, with employees working on a forty-hour, five-days-a-week basis.

In earlier days the hospitals did not require the services of large numbers of skilled technicians and tradesmen in almost every branch of industry which they now require to service and to maintain the large amount of highly technical equipment in their various departments. In those days also the hospitals relied on the cheap labour of inadequately paid and overworked trainee nurses, whose pay and conditions of service have now vastly improved. Even as late as 1920 for her fifty-six hours a week a Royal Melbourne Hospital trainee nurse in her second year received 9s. 2d.; today such a nurse receives £5 9s.

For the last few years the means test for in-patients has been abolished and until quite recently no payment whatever was required of them. Owing, however, to their increasingly desperate financial position, most public hospitals have recently sought some payment from patients for their accommodation costs, that is for food, maintenance, laundry *et cetera*, the medical and nursing services in the public wards being given completely free as heretofore.

At the same time the public hospitals are making every effort to reduce their expenditure without impairing the efficiency of the services they provide. In so doing it is an essential principle that the patient be protected and that he should not, on the grounds of its expense, be denied any treatment thought necessary for his recovery. Hospitals must, however, be assured of some reasonable financial stability so that they are not living a hand-to-mouth existence, wondering each month whether they can meet their tradesmen's bills and their other inescapable commitments. Even after all permissible economies have been effected these will not nearly suffice to bridge the gap between income and expenditure.

The following possible sources of income are available: (*a*) grants from the State or by a special tax for hospitals; (*b*) gifts and donations; (*c*) patients' payments; (*d*) insurance schemes, either with or without Government assistance; (*e*) lotteries. All these are used at present in some degree in the various States of Australia. They

are not mutually exclusive, and one or all may be used together.

State grants have increased considerably in recent years, and in many cases now represent up to 80% of the cost of the annual maintenance requirements of public hospitals. It would appear that unless the people themselves provide a substantial part of the money needed, the ultimate result must be still further provision by the State with increased taxation, and in the end State-managed hospitals, salaried medical staffs, and nationalized medicine. Such an arrangement would not be in the best interests of the community or of the standards of medical service provided by the hospitals.

Increased taxation, however worthy the object, is never popular, and other means have therefore been advocated, particularly by means of lotteries conducted by the State with their profits earmarked for the hospitals. For lotteries to be popular there must be substantial prizes, and usually 70% to 80% of the money received goes in prizes and administration and the remaining 20% to 30% to the hospitals. Apart altogether from any ethical or moral considerations, this is a most wasteful way, and also if the view is accepted that hospitals are an essential community service there would seem to be equal justification to run lotteries to maintain schools and other necessary public services. Also, in those States in which lotteries are conducted they do not produce by any means the total amount required. In New South Wales, for example, the public hospitals last year received about three million pounds from the State Lottery, but also received another six million pounds in the form of Government grants. Even then they were far short of the necessary funds to balance their budgets, and they are still in grave financial difficulties.

Voluntary gifts and donations from time to time are still generously provided. They are often for specific objects but, valuable as they are, they cannot be expected to meet more than a small proportion of the present heavy maintenance costs.

It would, however, seem reasonable that everybody while in health and regular employment should make some provision to safeguard his most valuable asset, namely, his health, by insuring himself and those dependent on him against the hazard of illness, particularly serious illness, when admission to hospital will be required. Such a principle is accepted in regard to his house, his motor-car, his life, and his other valuable possessions. Serious illnesses requiring hospitalization do not happen very often to most of us, so the regular payments necessary when in health are small, and are very much less than that now spent by most persons on such amenities as tobacco, alcohol, or amusements. Many such schemes are in existence and are rapidly growing both here in Australia and in other countries, especially in America. In some cases, as in Australia, the sickness and hospital benefits payable under such insurance schemes are now supplemented by the Government. With the hospital benefit payments received by contributors, supplemented by these payments by the Government, contributors admitted to public hospitals should find little difficulty in meeting the charges now being asked by the hospitals towards the cost of their accommodation. From many points of view the general adoption of the principle of insurance against sickness would seem to be the fairest and most acceptable method, and one which should be considered on its merits and not become involved in political considerations.

Private Hospitals.

Mention has so far been made of public hospitals, but there are many people who require treatment in private hospitals in which they meet their own hospital costs. The section of the community using private hospitals has always liberally supported the public hospitals. The costs of these private hospitals have also increased to the same extent as those of the public hospitals.

The high cost of establishing and maintaining hospitals nowadays has made it increasingly difficult for individuals or small groups of individuals to conduct private hospitals, as was previously the case. There are, therefore, many less of these now in Melbourne than there were a few years ago.

In 1912 and for some years afterwards intermediate beds in private hospitals in Melbourne could be obtained for three and a half to four guineas per week and full private accommodation for six to eight guineas. Similar accommodation today costs not less than fifteen guineas for intermediate and twenty to twenty-five guineas per week for private accommodation. Melbourne is very fortunate in that churches and large philanthropic organizations have established large, well-equipped private hospitals which are not conducted for profit, but are regarded by their founders as part of their contribution to the social services of the community. Even with the increased charges of recent years these hospitals in most cases do not balance their budgets and have to be assisted by subventions from the organizations conducting them. There are not, however, nearly enough of them to meet the demand.

Community Hospitals.

From what has already been said it is apparent that the costs of establishing, equipping, and maintaining modern hospitals has greatly increased and will continue. It would therefore seem reasonable that the benefits to be gained from them should be made as widely available as possible. In a paper which I read in 1928 on hospitals at the inaugural meeting of the Royal Australasian College of Surgeons it was then stated that the objective should be that every person in the community in need of surgical service is provided for, and in such a way that the best of which modern surgery is capable can be obtained at a fair and reasonable cost for those able to pay, and free for those who cannot. The same principle, of course, applies to those requiring medical or other forms of specialist treatment in a hospital.

Where space permits in existing hospitals, or where new ones are being built, paying patients, part-paying or contributing, and those not able to pay anything should all be provided for. In the country base hospitals in Victoria and in the new hospitals planned for the metropolitan area of Melbourne this principle has been adopted. It should, however, be accepted that the really necessitous for whom the public hospitals and public wards have been established should have first call on the available accommodation. Whenever possible, the patients who are meeting their own costs of hospitalization should be provided for in a separate block or building adjacent to the main hospital, such as in Gloucester House in Sydney in relation to the Royal Prince Alfred Hospital, and in Hamilton Russell House in relation to the Alfred Hospital, Melbourne. They are thus enabled to utilize and pay for the facilities provided by the parent hospital for much of their essential services, with a reduction in costs and overhead expenses. The costs of conducting such a hospital on the community principle are thus more evenly spread over all those making use of their services. The State, however, should still be relied on to meet part of the costs, particularly of those patients who are unable to pay anything, or only a negligible part of the costs of their treatment. The benefits from widely supported insurance schemes should also provide substantial amounts towards the cost of maintenance.

There should still be full opportunity for private benevolence, and those who give, as well as those who receive, would be the poorer if those more fortunately situated did not continue to regard it as a responsibility to help those not so well circumstanced. There would also still be an ample field for the continuance and extension of the work of private hospitals.

Conclusion.

In this necessarily brief review of the many complex problems associated with hospitals and their management I have expressed only my own personal views based on an experience of work in hospitals in various capacities over the last forty years.

The leaders of medical and public opinion have the responsibility of shaping our future policy which they

cannot ignore. A solution of the problems must soon be found, which will ensure that these institutions, which so vitally concern every one of us, are enabled to continue their essential work.

SURGICAL ASPECTS OF THE KOREAN WAR, MARCH, 1951, TO FEBRUARY, 1952.

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IT is proposed to discuss in this article some surgical problems encountered among Korean war casualties during the period from March, 1951, to February, 1952, when I was in the area.

The posting provided a unique opportunity to meet surgeons from all countries supporting the United Nations Organization, and much benefit was gained by discussion of mutual problems.

It is unfortunate that, in many instances, the lessons of World War II have been forgotten. This article will attempt to describe a few advances in the management of battle casualties, but will also stress certain basic principles of war surgery which demand repetition with every new conflict.

At the British Commonwealth General Hospital in Japan, where most of the work was done, surgeons from Britain, Canada and Australia worked harmoniously together. The author freely acknowledges that many of the methods described in the management of cases are not original but were tried at the suggestion of his colleagues.

No statistics will be presented, as time did not allow a proper follow-up of many of the cases. However, from the author's own experiences, impressions and opinions will be expressed for what they are worth.

It is to be hoped that some good, at least medically, will come out of this "police action", which has produced as many surgical problems as either of the world wars.

FORWARD SURGERY.

It was a privilege to be attached for duty for a short time to the Norwegian Mobile Army Surgical Hospital in Korea. While there, I took the opportunity to visit similar American installations, commonly known as MASH's, which provide the forward surgical facilities for United Nations troops. It should be noted that the British Commonwealth has no casualty clearing station or general hospital in Korea, and that the forward surgical units are organized on American lines. It may be of interest, then, to discuss briefly the organization.

Theoretically, the mobile army surgical hospital is a 70-bed, tented, self-contained mobile unit. In actual fact, when the war was static in Korea, the MASH tended to accumulate more beds and equipment, so that it was not as mobile as originally intended. It is designed to work about 10 to 15 miles behind the front line and is equipped with staff and instruments to cope with battle casualties who would be endangered if evacuated further back. However, nurses are on establishment, and this fact sometimes prevents the unit from going so close to the front line, especially when the line is fluid. Patients are kept a minimum of time, unless the front is inactive or the patient unfit to move.

The casualties were received in two ways: (*a*) by ambulance car—from regimental aid post, field ambulances *et cetera*; (*b*) by helicopter—direct from the battlefield. Korean roads are notoriously bad and patients arriving by ambulance often reached the MASH shocked out of proportion to their injuries. Helicopters were reserved for very serious cases or for a situation in which the terrain was unsuitable for anything but air evacuation. There is no doubt that many lives were saved by helicopter crews, but it is well to realize that there are certain limitations to the use of helicopters, namely: (i) they cannot fly at night; (ii) they cannot fly in bad weather; (iii) there must be local air supremacy; (iv) they cannot cope with evacuation of more than a very limited number of casualties (mostly two stretchers); (v) the patients cannot be attended to in flight, as they are in "pods" in the outside of the fuselage.

Upon arrival at the MASH the wounded were resuscitated along ordinary lines. However, more blood was used in the treatment of Korean casualties than in any other war. It is interesting to compare the mortality rates of war wounded who reach a forward medical post (that is, excluding those who are killed in action). The rates were as follows: World War I, 10%; World War II, 5%; Korean War, 2·5%. These figures have the authority of the Director-General of Medical Services.

The greater survival rate in this war is perhaps due to three factors: (*a*) air evacuation, leading to reduction in the time-interval between wounding and surgery; (*b*) use of more blood for resuscitation; (*c*) extended use of antibiotics.

Group O(IV) blood was used almost exclusively, high-titre blood for casualties whose group was O(IV) and low-titre blood for others. In many cases no attempt was made to carry out even a direct slide "cross-match", and undoubtedly the incidence of blood transfusion reactions at the base was increased by this fact. To care for these problems, the MASH did not normally carry a trained resuscitation officer, such as is available in British installations carrying out a similar function.

The anæsthetics were given in many cases by nurses, who, unfortunately, did not come up to the standard of British anæsthetic specialists. It is the author's opinion that every MASH or like installation should have available an anæsthetist capable of using the relaxant drugs and the intratracheal technique. The time taken in closing an abdomen after an exploratory laparotomy can be at least halved by the use of relaxants. In special cases, for example, thoraco-abdominal wounds, they are of extreme value.

The type of condition treated at a MASH is similar to that treated at a forward surgical centre, that is, severe shock, open wounds of the chest, abdominal wounds, extensive muscle wounds, serious compound fractures and severe burns. Patients with neurosurgical and facio-maxillary conditions were evacuated further back. Once again it was demonstrated that in these highly specialized cases the patients should go direct to special units, even if this means a few more hours' delay. Antibiotics were used freely, and every man with a wound was given penicillin, usually in the form of procaine penicillin. The aqueous solution is preferable to the oily, because of ease of injection, but it was not always available. Streptomycin, aureomycin *et cetera* were used as indicated in specific cases. Lessons learnt in World War II as regards evacuation of wounded were borne out by experiences in this war. Once again the dictum was proved correct that "stitches and ambulance journeys are incompatible". If patients with abdominal injuries were evacuated too early, that is, before the tenth day, paralytic ileus, infected wounds and burst abdomens still occurred, despite chemotherapy.

Most patients were evacuated from the MASH by train to Seoul, then by air to Iwakuni in Japan (three hours), and then by train to the British Commonwealth General Hospital in Kure (two hours).

Latta (1951) points out that "evacuation of the patient from the front line is now organized to such a degree that he gets little chance of resting, and he may even be snatched away from approaching food". Many wounded arrived at the base tired out and hungry. The change in morale of these patients after their first good meal and sleep was very noticeable.

Medical Society.

The Thirty-eighth Parallel Medical Society of Korea was a unique organization formed originally by medical officers of the Third Division, United States Army. Soon

it expanded to include medical officers of all United Nations troops serving in Korea. A weekly clinical meeting was held to discuss medical problems related to the local needs.

It was no novelty for a paper to be read in English by a Norwegian surgeon to an audience including Indians and Turks. It was remarkable how well these meetings were attended, in spite of the fact that many had to brave inclement weather and the attentions of the enemy to be present.

BASE SURGERY.

Soft Tissue Wounds.

Patients with soft tissue wounds of the extremities reached the British Commonwealth General Hospital in Japan usually within one to five days after the wounding. Those with abdominal wounds and compound fractures often did not arrive until later.

As a general routine, every patient with a war wound was given procaine penicillin, 300,0000 units intramuscularly, twice a day from the time of arrival until the wound had been inspected and assessed. In every case, except those of a very minor nature, the wound was examined in the operating theatre with the patient prepared for, or actually under, a general anæsthetic.

In the case of a major wound an urgent estimation of the hæmoglobin percentage was performed pre-operatively. If this was found to be below normal, blood transfusion was given before operation.

Throughout the whole course of treatment of a major wound a careful check was kept on the hæmoglobin level and repeated transfusions were given to maintain normality.

Transfusion reactions were rather more common than in civil practice, and these were, perhaps, due to rapid and massive transfusions in Korea. Undoubtedly some were pyrogen reactions from use of imperfectly cleaned rubber tubing. The Americans used plastic tubing which was expendable, that is, it was used on one patient only, and apparently they did not have as much trouble as we did. Intragroup incompatibilities occurred in spite of the most elaborate methods of matching, and were in some cases a source of embarrassment. Dextran, used for resuscitation occasionally, has a tendency to cause rouleaux formation of the red blood cells and may have led to some difficulty in interpreting the matching. An experienced blood transfusion officer has a full-time job to do these days and is one of the most vital members of a hospital staff.

The guiding principle in the management of all wounds, whether soft tissue injuries or compound fractures, was to obtain early skin cover. Few wounds were treated by the Winnett-Orr closed plaster technique, except those with established bone infection or those with exposed bone, so that granulations could form preparatory to skin grafting. The aim was to have all wounds closed within twenty-one days of wounding. The methods of closure comprised delayed primary suture, secondary suture, skin grafts and skin flaps.

Delayed Primary Suture (DPS).

Delayed primary suture was considered to be the second stage of a primary operation carried out some days previously in Korea. For it to be a success the primary operation must have been a complete one.

The wound, which had been adequately debrided in Korea, was cleaned, gently explored in order to excise any tags that had been missed, and then closed by interrupted suture with a minimum of tension. Buried sutures were used as rarely as possible to avoid infection.

It was my experience that if a wound was closed by delayed primary suture before the fourth day it was very likely to break down. The optimum time for delayed primary suture was between the fourth and ninth days. After nine days the skin edges begin to epithelialize and secondary suture is required. Drainage of the wound was rarely considered necessary unless hæmostasis could not be obtained. At the beginning, penicillin-sulphanilamide powder was sprayed onto all the wounds, but later the practice was discontinued without any appreciable difference in the end result. Skin sutures were not removed before the tenth day, as it was found that sound healing of a war wound was rarely complete before that time. With major wounds, a diet of high-protein content with added vitamins was ordered to promote healing.

After some experience one found that certain wounds healed satisfactorily under slight tension, but if one was in doubt it was safer not to close the wound but to prepare it for grafting. The dorsum of the foot, the shin and the back of the thigh were notoriously bad sites for healing, and most of our failures were in these areas. It was most important here to ensure perfect hæmostasis, a clean wound and no tension.

Secondary Suture.

When the tissues had lost their pliability and the skin edges had begun to epithelialize, any attempt at direct closure was not successful. The epithelium had to be excised, the skin edges undermined, and the granulation tissue in the base scraped or excised before closure. Often there was a fair amount of bleeding from fresh capillaries, which was difficult to control except by hot packs. Therefore there was a tendency to use drainage in these cases more often than in those in which closure was by delayed primary suture. The drainage was carried out by a deliberately placed counter-incision or through the end of the wound.

If there was any undue skin tension, flaps had to be fashioned or the raw area covered by split-skin grafts.

Skin Grafting.

Almost universally employed was the split-skin graft, cut freehand with the Blair or Humby knife. A dermatome would have been useful for major wounds but was not available.

The grafts were applied as "postage stamp" or patch grafts because of the greater percentage of "takes". It was surprising how many "took" under adverse conditions and in the presence of mild sepsis. It was usually a clinical decision (that is, depending on the appearance of the wound) whether to graft or not, and rarely was a bacteriological examination performed before grafting. If the wound looked dirty, a swabbing was taken for culture. The wound was then prepared for a few more days with eusol, hypertonic saline or other wet dressing dictated by the bacterial flora.

It should be remembered that in many instances the split-skin graft was not to be the final skin cover, as a pedicle or full-thickness graft would be required in the home hospital (for example, in Australia). However, our prime object was to obtain early skin cover, so as to be able to evacuate the patient quickly and comfortably.

A layer of "Vaseline" gauze and pressure dressings were used in most cases and removed for redressing in eight to ten days. If it was felt that there was a likelihood of infection, the dressing was done in three or four days and the wound treated with saline packs. In some cases towards the latter part of the period, skin grafting was carried out and the wound left exposed. In areas where it was difficult to apply pressure bandages, it was surprising how efficacious this method was. It demonstrated that pressure is not essential for successful grafting.

We found that exposed bone and tendon could be covered with split skin as a temporary measure with reasonable prospect of success and great improvement in the patient's well-being.

Compound Fractures.

Femur.

Patients with compound fractures of the femur were received from Korea usually in a one and a half leg plaster spica, the "Tobruk splint" (basically a Thomas splint reinforced by plaster) never being used.

An X-ray examination was made soon after the patient's admission to hospital, and if the position was satisfactory,

the spica comfortable and the site of the wound marked, then a window was cut to deal with the wound and the patient evacuated later in the same plaster.

If the X-ray examination showed the position of the fragments to be unsatisfactory, the plaster was removed, the fracture manipulated and the wound treated in much the same way as an ordinary soft tissue wound, that is, closed by delayed primary suture or dressed in preparation for secondary suture. Once again it should be emphasized that the dominating principle in these cases was to obtain skin cover as soon as possible. The Trueta or Winnett-Orr method was used rarely, and only in cases of infected fractures or cases in which exposed bone had to be covered with granulations prior to grafting.

If the fracture was unstable or there was shortening, a Kirschner wire was introduced through the tibial tuberosity and traction applied. The limb was immobilized in a Thomas splint with a knee-piece. When the fracture was relatively stable and preferably after closure of the wound, the patient was evacuated in a plaster spica or a "Tobruk splint".

The American surgeons at base hospitals in Japan used intramedullary nails extensively in all types of compound comminuted fractures of the femur. I had the opportunity to see some of their results and was quite impressed, especially with the anatomical result. The bogy in war wounds, of course, is infection, and this method should be used only in special hospitals under excellent conditions.

Tibia.

A compound fracture of the leg, with skin and tissue loss such as is caused by a war wound, was one of the greatest problems encountered. When possible, a rotation or bipedicle flap operation or similar plastic procedure was performed to cover the fracture site and the resultant raw area grafted by split skin. If this was not feasible, the exposed bone was allowed to granulate for a while, then "postage stamp" split-skin grafts were applied with rather more success than was expected.

The difficulty was to maintain good position of the fracture and immobilization at the same time as dealing with the wound. In many cases these seemed mutually antagonistic. At first men with compound fractures of the tibia were put up in long leg casts, but this was largely abandoned later because of the necessity to remove the cast in dealing with the wound. It was retained when there was a small wound which could be dealt with through a window cut in the plaster.

The next method tried was the use of a Thomas splint; this was helpful when the wound was on the front of the leg and daily dressings were needed to prepare it for grafting *et cetera*. Another satisfactory method was to use a Braun's frame with a Kirschner wire through the *os calcis* to provide traction. This was adopted especially in cases in which there was shortening or instability.

Humerus.

A shattered humerus with radial nerve injury was another problem. A thoraco-brachial cast was applied with a window cut if the wound was accessible. Otherwise a Kirschner wire was inserted through the olecranon to provide some stability, while the wound was prepared and closed.

A Bunnell type of splint was used to prevent wrist-drop and contracture of the long flexor tendons. In addition, active and passive movements of joints not immobilized were encouraged from the start.

Physiotherapy plays a very important part in the management of war wounds, and we were fortunate in having keen and competent physiotherapists attached to each ward.

Joint Injuries.

Infection is a tragedy of major proportions in wounds of the joints. At all costs it should be avoided, as it will increase the period of convalescence tremendously.

The practice in forward areas of excision of the wound, irrigation of the joint and suture of the capsule, the skin being left open, has borne fruit. In remarkably few cases did the joint become infected.

Knee Joint.

Patients with knee joint injuries were evacuated usually in a long leg plaster cast or a plaster spica. Immobilization of a potentially infected joint is of the greatest importance, far more so than in the case of a long bone. For this reason, if there was no rise in temperature, no toxæmia and no enlargement of the inguinal glands and the cast was comfortable, the patient was often left in his original cast and given simply antibiotics by the parenteral route. The only occasion when our general principle of early skin cover of wounds was not applied was in the management of joint injuries. When the patient was left about two weeks there was little possibility of an exacerbation of any latent infection in the joint during the movement inherent in the changing of a plaster and *débridement* of a wound. When that period elapsed, secondary suture or skin grafting could be performed with confidence.

If the cast was uncomfortable or signs of infection appeared, the cast was removed under anæsthesia with the utmost gentleness. The joint was aspirated and the fluid sent for culture, penicillin being instilled in the meantime. The wound was treated either by delayed primary suture or by *débridement*. In one case there was a gross collection of clotted blood in the joint. In that instance the capsule was reopened, the clot removed and the joint irrigated; then the capsule was resutured, the skin being left open. The limb was immobilized usually in a Thomas splint or a "Tobruk cast", so that the joint could be readily approached. If from the original fluid aspirated any organisms were grown, the joint was aspirated at regular intervals, under local anæsthesia, and the appropriate antibiotic was instilled.

Physiotherapy and quadriceps exercises played a large part in the post-operative care of these patients.

Shoulder Joint.

The main problem with shoulder joint injuries was the question of immobilizing the joint whilst leaving it accessible to examination and treatment. Either a thoraco-brachial cast with a window cut or an abduction frame was employed. One consolation was the fact that joint wounds of the upper limb did much better than those of the lower limb.

Amputations.

It is surprising how easily the attitude of the different army medical corps towards amputations can be misunderstood.

Soon after arrival in this area I was told that guillotine amputations were the only type authorized by the Americans, but that they were strongly discouraged by the Commonwealth authorities. It was some time before I realized that the Americans invariably evacuated the "amputee" to the United States, where the stump was revised in every case.

Everyone agrees on the general rule that amputations should be at the lowest possible level, to retain the maximum length of bone. However, I believe that skin flaps should not be wantonly sacrificed if they are available.

Certainly, in many cases in this hospital closure could be effected by delayed primary or secondary sutures without sacrifice of bone and without risk of spreading infection. The patient is much more comfortable if the wound is healed, as it should be, within three weeks. Later the stump may be revised in certain cases, if this is necessary. I feel that it is unreasonable to adopt a policy which dictates that every amputation should be revised.

Secondary Hæmorrhage.

Secondary hæmorrhage did not frequently occur, but there were two very severe hæmorrhages from the femoral artery which had to be ligated.

The impression gained was that infection did not play a major part, but rather that there was a partial laceration

of the vessel at the time of wounding. When the blood pressure rose and the patient began to move about, the clot filling the defect was displaced, with resultant torrential hæmorrhage.

An interesting, and at first puzzling, complication was a delayed concealed hæmorrhage, which occurred in relatively minor wounds of the lower part of the leg. The patient had often been wounded a few days before and the wound was granulating well. Then the patient complained of local pain, swelling and tenderness. At first the possibility of infection or osteomyelitis had to be considered, but rarely was there any significant temperature rise or toxæmia.

When the wound was explored in the operating theatre a large collection of blood clot was found lying beneath the deep fascia in the region of the interosseous membrane of the tibia and fibula, but not connecting with the exterior.

As soon as the clot was evacuated, alarming arterial bleeding commenced. When this was controlled, the posterior tibial (or peroneal) artery was found to have a tangential laceration, which was treated by division and ligation.

Helsper (1951) thinks that early care and use of antibiotics have increased the incidence of delayed concealed hæmorrhage by ensuring early healing of the wound without infection.

Abdominal Wounds.

We received patients with abdominal wounds mainly five to ten days after operation. A few arrived earlier, and most of these were in bad shape due to travelling. Their wounds had become infected and in some cases they had developed paralytic ileus on the journey.

If the military situation permits, there is no doubt that these patients do better if left in the centre where the operation was performed until equilibrium is established. It is desirable not to evacuate them before the sutures are removed or before the bowels have acted. This point is seldom reached before the tenth day. It is the duty of the surgical consultant to repeat again and again this dictum. The patient may be well when he leaves the forward installation, but the damage done by an early journey may add weeks to his final convalescence.

Any colostomy performed was often of the "defunctioning" type, with a skin bridge between the two loops. If time is available for this procedure, it is more efficient in diverting the fæcal stream than a rod colostomy. However, it is a more extensive procedure and not satisfactory for a shocked patient.

"Through-and-through" wire sutures were employed in closure of the abdomen by the Americans, but, in my opinion, they were far from satisfactory. Certainly they did not reduce the incidence of wound sepsis. The skin edges themselves were often not approximated, and granulations became exuberant and painful. In other cases the wire semed to cut in and to cause sloughing of wound edges and in many cases could not be removed except under general anæsthesia.

Subphrenic Abscess.

Subphrenic abscess was encountered in association with a number of major abdominal wounds, but was often more difficult to diagnose than in ordinary civilian circumstances. The antibiotics are a mixed blessing, in that they reduce the raised temperature and toxæmia while allowing a massive abscess to develop with minimal signs.

In many cases repeated penetrating basal and lateral X-ray examinations were necessary before the diagnosis was confirmed. The abscess was drained usually by rib resection with an extraserous approach. Needling of the abscess was felt to be both dangerous and ineffective.

Immediately surgical drainage of the pus was performed a change in well-being was noted. The hæmoglobin percentage, which had been very difficult to raise by blood transfusions pre-operatively, was more easily improved.

Chest Wounds.

Every effort was made to obtain good X-ray films in two planes as soon as possible after admission of a patient with a chest wound. Repeated films were prepared during treatment.

Hæmothorax.

Hæmothorax was treated by repeated aspiration of the chest under local anæsthesia until the blood had been completely absorbed and the lung had expanded. Certain points in the technique of aspiration need emphasis: (i) Use a wide-bore needle (13, 15 or 17 gauge) and a well-fitting syringe with a two-way tap. (ii) Do not allow air to enter the chest during the aspiration, otherwise collapse of the lung will occur. (iii) Remove as much blood as possible without distressing the patient. (iv) Do not forget that the diaphragm rises after infliction of a chest wound. Therefore, avoid the tendency to introduce the needle too low. (v) After aspiration, instil penicillin and streptomycin into the chest (under bacteriological control) to prevent infection.

During the April battle many chest wounds were treated in Korea by thoracotomy and drainage by intercostal tubes. In these cases the condition almost invariably became loculated, and it was very difficult to remove all the blood by aspiration. The surgical consultant directed that this method of management be discontinued, and the patients with chest wounds seemed to do better.

In a certain number of cases of hæmothorax the blood in the pleural space coagulates and begins to become organized soon after injury. These patients with clotted hæmothorax were considered for possible open thoracotomy and decortication of the lung to prevent them from becoming pulmonary invalids. Within a matter of a couple of weeks they develop a flattened chest, wasted muscles, fallen shoulder and poor air entry. In severe cases thoracic scoliosis develops rapidly.

The indications for decortication are difficult to define, but if the X-ray appearance suggests that most of one lobe is bound down by the clotted blood, operation is usually justified. The patient is treated by physiotherapy, and if, while under observation for a certain period—for example, two weeks—he obtains no increase in chest expansion, air entry or exercise tolerance, then operation should be performed to avoid permanent ill effects.

The problem is that a decision must be made relatively early, as there is an optimum time for operation—namely, three to six weeks after the wounding. At this period the clot has become organized into a layer of fibrous tissue, which can be readily "peeled" from the surface of the lung without trauma being caused. After six weeks fibrosis starts to occur in the lung parenchyma, and even if the constricting layer of fibrous tissue is removed, the lung does not readily expand.

The best result is obtained if all the "peel" is removed from the diaphragm, attention being paid to the costophrenic sulcus, and the parietes as well as the visceral layer surrounding the lung.

When the pleural cavity has been cleared, the anæsthetist inflates the lung under positive pressure, while the chest is being closed. The pleural cavity is drained for forty-eight hours by a basal and apical catheter leading to an underwater suction apparatus.

Active breathing exercises and vigorous physiotherapy are insisted upon from the outset, and a great improvement is usually noted in the exercise tolerance and clinical state of the patient.

The final assessment of the value of decortication of the lung will not be made for many years, until the late end-results can be compared with those in similar cases in which conservative treatment was used.

Pneumothorax.

Patients with traumatic pneumothorax were treated by repeated aspiration of air under local anæsthesia. The "artificial pneumothorax" apparatus was used so that the pressures within the pleural cavity could be controlled. In

most cases the condition resolved rapidly and we did not have to resort to underwater suction with an intercostal tube.

Atelectasis.

We had difficulty in some cases, especially with thoraco-abdominal wounds, in dealing with atelectasis after inexpert anæsthesia. The patients responded to bronchoscopic aspiration if treated early, but did not do well if left longer than seven days.

Empyema.

Very few empyemata were encountered in association with pure chest wounds, but they were not so uncommon after thoraco-abdominal wounds. It was often extremely difficult to differentiate between a subphrenic abscess and an empyema, especially if the missile had perforated the diaphragm. X-ray films were not easy to interpret, and the diagnosis was often in doubt until needling was carried out immediately prior to operation. In the presence of pus, rib resection and drainage by a large-bore tube were indicated. The tube was not removed until lipiodol, injected prior to X-ray examination, proved that no cavity remained. Great stress was laid on the importance of active breathing exercises.

Thoraco-Abdominal Wounds.

Patients with thoraco-abdominal wounds, naturally enough, are more subject to complications than those with either thoracic or abdominal wounds by themselves. It should be carefully considered whether the chest injury can be dealt with adequately by aspiration and the abdominal lesion by laparotomy. The thoracic or thoraco-abdominal approach carries with it certain hazards in emergency surgery of war wounds. Certainly it is much easier to remove a spleen from above, but there is no guarantee that the bowel has not been perforated at the same time. One of the principles of management of a perforating wound of the abdomen is that a full examination of the whole of the abdominal viscera is essential, and this cannot be done when one is working through the chest.

If a thoraco-abdominal wound is approached from above, then an empyema is a common complication if the colon happens to have been damaged. This complication can be the "final straw to break the camel's back" in the case of a major wound.

In many of these cases the patients developed persistent atelectasis, which responded only with difficulty to postural coughing and bronchoscopy.

Neurosurgical Cases.

Patients with neurosurgical conditions were handled almost exclusively by the Americans, and I should like to express profound admiration for their excellent treatment. The neurosurgical service provided a team at a MASH and another at an evacuation hospital in Korea, as well as the main part of the unit at the Tokyo Army Hospital.

Many patients who had undergone craniectomies and laminectomies were evacuated through the British Commonwealth Hospital, and the excellent morale and functional recovery, even after three weeks, were most impressive.

One of the greatest advances in the management of paraplegia was the Stryker frame (or "Rota-frame Wat-Vic"), which was used exclusively in such cases. By use of this apparatus a patient can readily be turned from the supine to the prone position and back again every two hours. At last bed sores, the curse of the paraplegic, can be avoided.

The patient with a neurogenic bladder was treated with an indwelling Foley catheter aseptically introduced, suprapubic catheterization only rarely being adopted. The tidal drainage apparatus described by McKenna (referred to by McCrea, 1949) was attached to the catheter, so that the bladder could be regularly irrigated with solution "G" (citric acid 32·25 grammes, magnesium oxide 3·84 grammes, sodium carbonate 4·27 grammes, water to 1000 millilitres), which tends to prevent the formation of phosphates.

Paraplegics were encouraged to get out of bed in a Taylor brace within eight days of a laminectomy. Physiotherapy was actively employed from the start to prevent ankylosis of joints.

Burns.

Many patients with severe burns were admitted to the hospital during the twelve months, and the majority were treated by the "exposure" method.

The patients arrived from Korea usually with compression dressings, although some had been treated by exposure from the start. In these cases the burns were often infected on arrival, and it is strongly recommended that when patients with burns have to be evacuated they should be dressed prior to departure.

Biochemical investigations were performed in the severe cases, and plasma or blood was given intravenously as indicated. After a preliminary injection of 1,000,000 units of crystalline penicillin the patient was taken to the theatre, where the burns were gently cleansed with "Cetavlon" (or "Zephiran"). This procedure could often be performed with the patient under the influence of intravenous procaine analgesia, supplemented by injections of pethidine, although a few patients required general anæsthesia.

After cleansing and *débridement* (which included snipping of blisters), the burns were left exposed to the air, the affected part being elevated and, if possible, immobilized.

Within forty-eight hours a firm crust formed, probably containing a bacteriostatic concentration of penicillin from the preliminary injection. By then the patient was usually very comfortable and free from pain.

The crust began to separate within two or three weeks, by which time the epithelium had grown in and the burn healed, unless it was a full-thickness burn.

The advantages of the "exposure" method of treatment are as follows:

1. It is economical. The saving in cost of dressings over a period of time is colossal. In addition, it is possible that mass casualties from a major catastrophe, for example, atom bomb attack, would quickly exhaust the supply of materials. In such an event it is reassuring to know that good results can be obtained without pressure dressings.

2. It is painless. Once the crust has hardened the patient is completely free of pain and is spared the discomfort of frequent dressings and possible administration of anæsthetics.

In my opinion the exposure method is indicated in most cases of first and second degree burns, but it is not the complete answer for third degree or full-thickness burns. It has definite limitations in that it cannot be applied for circumferential burns or for burns of the back of the trunk, buttock or thigh, especially if associated with burns elsewhere. For really deep burns of the hands, likewise, it is unsatisfactory, in that the fingers become stiff while one is waiting for the crusts to separate.

The problem of full-thickness or deep burns is still unsolved, and all one's ingenuity, skill and perseverance are required. The diagnosis of a third degree burn is not easy at the first dressing, and it is often ten to fourteen days before the true depth of the burn can be assessed. If the crust of an exposed burn did not separate within eighteen to twenty-one days, the burn was often found to be "third degree" and required grafting.

The answer to third degree burns is early skin grafting and the whole of one's efforts should be directed towards that goal. Our aim was to commence skin grafting within three weeks of burning, so that, whatever the method of treatment, the burned area should be prepared by that time. Therefore, if the crust had not separated, it was excised under general anæsthesia at about the third week. It was noted that this procedure was associated with severe surgical shock, so that it often had to be performed

in stages. In two cases persistent oozing from exposed vessels was an embarrassment post-operatively and blood transfusion was required. The vessels were often too friable to hold a ligature.

The next stage was to prepare the burn for grafting by use of moist dressings of eusol or hypertonic saline, or by appropriate chemotherapy. At every opportunity, and certainly once a week, a swabbing was taken from the burn, and any organism grown was tested for sensitivity against penicillin, streptomycin, anreomycin and "Chloromycetin". Only in this way could intelligent use be made of the antibiotics. We found that it was necessary to change the drug at regular intervals as resistant organisms appeared.

The Bunyan bag still has a place in the preparation of burns of the extremities, especially those of the hands, prior to grafting. We had two complications of secondary hæmorrhage occurring within the bag, when a slough separated to reveal a thin-walled, mildly infected blood vessel.

After cleansing, the burn was covered with fine mesh gauze (for example, roller bandage) applied as a pressure dressing. It was found that ordinary wide mesh gauze (four inches by four inches) or *tulle gras* provided an unsatisfactory base upon which to graft. Granulations grew between the interstices of the wide mesh gauze and were damaged during removal of the dressings prior to grafting. Likewise, *tulle gras* tended to stimulate the growth of exuberant, moist and œdematous granulations unsuitable to receive a graft.

Emphasis has been laid already on the need for early grafting. In my opinion the presence of mild sepsis (except that due to *Streptococcus hæmolyticus*) is no bar, and grafting should commence by the fourth week, even with the possibility of only about a 30% "take". I have noted repeatedly that patients with major burns lose weight and fail to respond, in spite of repeated blood and plasma transfusions, diet of high protein content *et cetera*, until the raw area is covered by skin.

In the early stages split-skin patch grafts were applied to ensure a greater percentage "take", but at later grafting operations larger sheets were used. Because no dermatome was available, in some cases we had to use the thighs as donor areas more than once, and found that these subsequent operations were not as successful as the first ones.

Usually pressure dressings were applied, but in positions where this was impracticable, we exposed the grafts to the air exactly as we had done with the burns. It was surprising how successful many of these grafts were.

A physiotherapist was in attendance from the beginning to try to prevent the stiffening of joints. With the hands, skin grafting and movement were mutually antagonistic, and each case had to be judged on its merits. If over 80% of the graft was likely to take, the hand was immobilized in a position of function, and only when the graft was adherent did movements commence. If only 30% or less was likely to take, then early movements were encouraged, to avoid stiffening of the fingers while healing progressed.

Cold Injuries.

Since the winter of 1951-1952 started, fewer patients with "frost-bite" or "immersion foot" have ben admitted to this hospital in comparison with the same period of the previous year. The probable reason is that the problem has been extensively studied, the troops have been issued with special winter clothing, and the combat commanders are aware of the importance of the subject. Another important factor is that, so far, there has been no major action under winter conditions.

The following *régime* was prescribed for patients suffering from exposure to extreme cold: (i) no smoking; (ii) strict bed rest in severe cases; (iii) a sheet kept raised above the feet; (iv) daily painting of the feet with "Zephiran"; (v) leaving of all blisters intact; (vi) local application of dry, loose dressings; (vii) procaine penicillin, 300,000 units injected intramuscularly twice a day; (viii) nicotinic acid tablets, 100 milligrammes three times a day; (ix) "Multivite" tablets, one three times a day; (x) tetanus toxoid, "booster" dose of one millilitre.

The tendency has been to be very conservative in the matter of amputations, to wait until the part affected by gangrene has actually separated, and not to amputate too high or too early.

It has been found that if a soldier has suffered from frost-bite in one winter, it is useless to send him back for the next, as he will surely suffer again. For severe cases a "frost-bite solution" for intravenous injection has been prepared by the Americans. In addition, a new powder is being produced which may help to prevent frost-bite by reducing sweating by 50%.

The most important thing to remember about cold injuries is that they can be prevented. The number of casualties from this cause reflects on the administrative command of the unit involved.

It should be noted that all patients with frost-bite should be evacuated as stretcher patients. General treatment should take second place to local in the case of frost-bite.

Anæsthesia.

We were extremely fortunate to have available a series of specialist anæsthetists from the Royal Army Medical Corps. With difficult cases it was reassuring to be able to concentrate on the surgery involved and not to have to worry about the anæsthesia.

Relaxant drugs and intratracheal tubes were used extentively in conjunction with all the modern anæsthetic agents. These combined to keep the patient at a lighter plane of anæsthesia, so that he was usually conscious by the time he left the theatre.

"Pentothal" inductions were gratefully accepted by the patients, and anæsthetic complications were few and far between.

Reflections on an Integrated Hospital.

As I believe the British Commonwealth General Hospital in Japan is the first integrated unit of its kind ever to be formed, perhaps a few comments about it would be of interest.

At the time of writing the organization provides for 600 beds staffed by British forces, 200 by Canadians and 200 by Australians. There is one commanding officer, one principal matron and one registrar. It has been found to be most satisfactory to have these three key personnel drawn from one country, presumably the one which is employing the greatest number of troops. Each of the two smaller components has its own matron and its own administrative officer.

Because it is sometimes difficult to have complete control over an officer in a different army, it has been decided that the officers commanding the medical and surgical divisions should also belong to the same corps as the commanding officer.

Where possible, the wards have been worked on the integrated system, namely, that the specialist is of a different country from the sisters maintaining the ward. There are many reasons for this. Perhaps the most important is to reduce the amount of international discord which inevitably arises in an integrated unit. One wishes to avoid a situation where an individual or a ward is criticized because it is Australian (or British or Canadian). An integrated ward is judged on its merits, and no "red herring" of a particular nationality is brought into the discussion.

While each component may like to work with its own people and treat its own wounded, such an arrangement is impracticable. Units of the Commonwealth Division go into action at different times, and the base hospital may receive casualties almost exclusively from British troops one week and Australian troops the next. Thus it is obvious that one could not have, for example, a Canadian surgeon in a ward of Canadian sisters looking after Canadian soldiers exclusively. For one month he might have little to do and next month much more than he could cope with.

In an integrated unit there is likely to be more friction than in a unit staffed by the one army. Therefore the personnel should be chosen with due regard to their ability to mix, as well as for their technical ability.

The British Commonwealth General Hospital has worked efficiently and well, in spite of initial "growing pains"; and most of us, I am sure, will have pleasant recollections of happy associations formed with surgeons from other parts of the Commonwealth.

Summary and Conclusions.

The experiences of an Australian surgeon working in Japan and Korea have been recorded. The organization of a mobile army surgical hospital in Korea is discussed. The following conclusions have been reached:

1. Helicopter evacuation from the battlefield, while very valuable, has certain definite limitations.

2. The general principle in treating open wounds is to obtain skin cover within twenty-one days of wounding by delayed primary suture, secondary suture or skin-grafting.

3. The greater survival rate of war-wounded in this "police action" is due to early surgery and to increased use of blood and antibiotics.

4. The experiences of two world wars need repeating: casualties with sutured wounds should not be evacuated, otherwise infection will ensue.

5. Delayed concealed secondary hæmorrhage is a puzzling complication of leg wounds.

6. Chest wounds should not be treated initially by drainage with an intercostal tube, otherwise loculation of blood occurs.

7. Clotted hæmothorax is treated satisfactorily by decortication of the lung between the third and sixth weeks after wounding.

8. Thoraco-abdominal wounds should rarely be approached through the thorax.

9. Stryker frames are extremely valuable in the management of paraplegia by preventing the development of bed sores.

10. The "exposure" treatment of burns is useful for first and second degree burns, but early skin-grafting is essential in full-thickness burns.

11. Prevention is better than cure in "cold" injuries.

12. An integrated hospital provides excellent opportunity for surgeons from all parts of the British Commonwealth to work harmoniously together to the benefit of all concerned.

Acknowledgements.

It is a pleasure to acknowledge the hospitality of the staff of the Norwegian Mobile Army Surgical Hospital in Korea. Like all troops who passed through their hands, I was impressed by their kindliness and their utter humanity. Likewise, I wish to pay tribute to the American surgeons, who were extremely courteous and helpful in demonstrating their methods.

Thanks are also due to Brigadier C. W. Nye, O.B.E., Royal Australian Army Medical Corps, Deputy Director of Medical Services, British Commonwealth Forces, Korea, and Colonel J. E. Snow, O.B.E., Royal Army Medical Corps, Commanding Officer of the British Commonwealth General Hospital, Japan, for their experienced advice and kindly criticism.

Lastly, this article is published with the permission of Major-General F. Kingsley Norris, C.B.E., D.S.O., E.D., Director-General of Army Medical Services, whose help in its preparation is gratefully acknowledged.

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HELICOPTER EVACUATION IN KOREA.

By N. M. Kater,
Sydney.

The Korean campaign is the first in which helicopters have been used to evacuate wounded from front-line positions.

Korea is a mountainous country with the exception of portions of the west coast, and in the centre and east the mountains are high and steep, necessitating a long carry-out for wounded, at times up to eight hours, requiring at least four stretcher-bearers, sometimes more, before the jeep head is reached. Then follows a trip of perhaps an hour in a jeep ambulance, often a rough trip, followed by a further trip in a standard ambulance before a surgical unit is reached.

Helicopter evacuation is performed in conjunction with a MASH (mobile army surgical hospital), on which are based several helicopters.

Figure I.

The MASH is located a short distance behind the forward positions.

For successful helicopter evacuation it is necessary to have command of the air over the front line, also to have good communications so that a helicopter can be called in quickly and so that our own artillery can be notified to cease fire during the period of the evacuation.

Until December, 1951, over four thousand wounded had been evacuated from front-line positions.

The helicopters are fitted with skids in place of wheels to enable them to land on rough ground, ascent and descent being vertical.

Each helicopter carries two stretcher patients in "pods", one on each side, situated outside; the patient's head and shoulders slide under a canopy, and he is well wrapped in blankets and strapped in.

A method is being devised to give plasma to a patient whilst in flight if necessary.

Many severely wounded men are receiving a blood transfusion within one hour of being hit and are soon after on the operating table. In many cases this has been life-saving; blood lost is replaced before the patient reaches a stage of profound shock, and a long period of resuscitation is not required.

A MASH on the central front has a neurosurgical team. A patient with a gunshot wound of the head involving the brain undergoes an immediate craniotomy.

Within twenty-four to forty-eight hours, as soon as he is fit to travel, he is taken by helicopter to Seoul City airport; he is picked up there within an hour by Skymaster

and flown to Tokyo, where the United States Army has a large neurosurgical clinic.

Occasionally helicopters are hit by small-arms fire on landing in forward positions, but none has been hit in a vital spot.

On one occasion I saw a North Korean Yak fighter attempting to shoot a helicopter down, but the helicopter was too manœuvrable and the Yak scored no hits.

There are several large hospital ships, which remain near the coast as required, acting as floating hospitals; a helicopter can land on the deck, and at times patients have been taken directly aboard by this means.

In conclusion, I should like to state that helicopter evacuation is entirely American.

Acknowledgement.

I wish to thank the Director-General of Medical Services, Air Vice-Marshal E. A. Daley, C.B.E., for permission to publish this article.

BACKACHE IN RHEUMATIC PRACTICE.[1]

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PROGRESS in our knowledge about backache will be made only if we think in terms of proved pathology.

A number of diagnoses are often made which are unproved, inadequate or extremely rare.

1. Muscular and ligamentous tears have never been seen in the back, and I would suggest that there is no scientific proof that they occur alone.

2. Sacro-iliac strain is sometimes diagnosed. The sacro-iliac joint is the strongest joint in the body and it possesses the most powerful ligaments. There is no scientific proof that this joint is ever strained, and the possibility of such a condition occurring must be extremely remote. There are many weaker structures in the back which will give way before the sacro-iliac joint.

3. Sacro-iliac subluxation cannot occur alone. It must be accompanied either by a subluxation or dislocation of the *symphysis pubis* or by a fracture of the pubis. I have seen this condition once.

4. The term lumbo-sacral strain is inadequate. The lumbo-sacral articulation consists of a disc and two lateral joints, and when lumbo-sacral strain occurs it is either a strain of the disc, most commonly, or of the lateral joints, probably rarely.

5. The term fibrositis was introduced by Gowers in 1904. He had no pathological evidence with which to support his theories, and after nearly half a century it is high time we ceased diagnosing a condition which has never been seen by the human eye.

6. Arthritis and periarthritis are not adequate diagnoses. The only types of arthritis which occur in the back are osteo-arthritis, and the rarely seen infective arthritis, by which term is meant arthritis due to the actual presence of organisms in the joint, not arthritis supposedly caused by a focus of infection elsewhere.

7. Spondylitis is also not an adequate diagnosis. Either the term should be preceded by the adjective ankylosing or rheumatoid, or it should be avoided as being too vague.

8. Adhesions have never been seen in the joints of the spine.

If we continue to make diagnoses which are without foundation in fact, then we place ourselves upon the same plane as the osteopath and the chiropractor. It is far better to make no diagnosis or to make a diagnosis which implies no specific pathology—for example "strained back" or "lumbago"—rather than to make a diagnosis which will almost certainly be proved wrong by one of your colleagues at a later date.

Backache which is not due to gross trauma may be physiological, psychological or pathological.

Physiological backache is the aching and stiffness which most of us experience when we do unaccustomed work, or work in unaccustomed positions. The cause of such backache is usually recognized by the individual; it lasts only a day or two, and seldom brings the sufferer to the doctor.

Psychological backache does occur, but this is a diagnosis which must be made only with great care, for the majority of backaches are organic in origin. Psychological backache is often of wide distribution and the ache is commonly constant; for example, a not uncommon complaint is that the patient has never been without the ache even for five minutes over a period of many months. Physical signs in such conditions are often absent or excessive. There may, for instance, be gross restriction of movement or excessive or extensive tenderness, either of which is much lessened when the patient's attention is distracted.

Pathological backache may be due to general, visceral and parietal causes.

General conditions causing backache include infections—for example, influenza—and anæmia.

Visceral disease rarely causes backache alone. There are nearly always other symptoms pointing to visceral disease. In my whole experience I can remember but one patient complaining only of a right-sided lumbar backache caused by gall-stones, and another patient complaining only of a right-sided backache caused by kidney stones. Such cases must be rare indeed. Backache is often thought to be uterine in origin, but in my experience pelvic disorders in women rarely cause backache without other symptoms. It is almost axiomatic to say that when a woman comes to a doctor complaining only of backache, then that backache is not due to a pelvic disorder even though one is found on examination. Women with pelvic disorders complain primarily of disturbances of menstruation, of abdominal pain and discomfort, of bearing down feelings, of discharge and so on, and if asked they will frequently state that they also have backache; but it is not backache which brings them to the doctor. Only once in ten years have I seen a patient whose only complaint was backache and whose ache was cured by a gynæcological operation, in this case a ventro-suspension.

The parietal causes of backache are mainly spinal conditions. These will be my main concern tonight, and in the course of half an hour I shall be able to discuss them only briefly.

The proved causes of backache of parietal origin which are met with in rheumatic practice include infections (rare in this country), epiphysitis, rheumatoid or ankylosing spondylitis, intervertebral disc disease, spondylolisthesis, the presence of loose pieces of lamina, spinal osteoporosis, osteoarthritis, Paget's disease, metastatic carcinoma and fatty nodes (Copeman's nodes). In addition to these backache is commonly a symptom of hip disease.

Epiphysitis, also known as Scheuermann's disease or adolescent kyphosis, is not an uncommon cause of backache during the growing period. Pain and tenderness are felt more commonly in the thoracic region of the spine, which tends to become kyphotic. Radiographic examination reveals irregularity and fragmentation of the vertebral epiphyses and perhaps wedging of the vertebral bodies and kyphosis. The condition tends to subside spontaneously when the epiphyses unite at about the age of twenty years. Treatment consists in the wearing of a spinal brace to prevent or correct deformity. Scheuermann's disease in adolescence probably accounts for those wedge-shaped vertebræ which are commonly seen in the lower thoracic and upper lumbar regions in adult life.

Rheumatoid or ankylosing spondylitis is a frequent cause of backache, especially in the second, third and fourth decades. Its incidence varies according to the type of practice of the authors of individual papers. Boland and Present (1945) stated that it accounted for 18% of cases of low backache in young men. In my experience pain in the back, with or without radiation to the lower limb, has been caused by rheumatoid spondylitis in 15% of males and 10% of females under the age of fifty years. In general and orthopædic practice it will account for a smaller proportion of cases because of a much larger percentage of traumatic backache in those types of practice.

[1] Read at a meeting of the Western Australian Branch of the Royal Australasian College of Surgeons at Perth on May 16, 1952.

The advanced disease with its rigid spine and poker back or gross kyphosis is easy to recognize; but tonight I am more concerned with the recognition of the disease in its early stages, and more particularly with those cases in which backache is the first symptom. Although the characteristic type of backache in rheumatoid spondylitis is stated to be an ache, which is present in the morning, and which disappears after the patient gets up, this type of pain does in fact occur only in about one-third of the cases, and it may also occur in patients with disc degeneration. The pain in rheumatoid spondylitis may come on during activity and be relieved with rest. In point of fact there is no characteristic type of pain in the early stages of this disease. Stiffness of the spine is by no means an early symptom, and the blood sedimentation rate is frequently normal in the early stages. The diagnosis of rheumatoid spondylitis in its earliest stages can, as far as I know, be made only by an X-ray examination of the sacro-iliac joints. The earliest radiological abnormality in an adult appears to be absence of the fine white lines of subchondral bone along edges of the sacro-iliac joints. The edges of the joint appear indistinct and blurred. This line is absent in the normal adolescent and normally appears at about the age of twenty years. Absence of this line is possibly significant in a patient in the late twenties, but in a patient in the early twenties its absence can only be considered suspicious. The second radiological sign to appear in the adult and the first sign to appear in the adolescent is sclerosis of the iliac portion of the sacro-iliac joint, especially in its lower two-thirds. The radiological signs of rheumatoid spondylitis have been described in greater detail previously (Young, 1951).

Disc disease is most common in the active period of life, but it may occur even in infancy and old age. It is the most common cause of backache, and the recognition of its frequency in this State is primarily due to first-class radiological technique. Careful radiological examination will demonstrate that disc degeneration is present in at least 30% of patients with backache; but we know from surgical experience that plain radiographic examination is capable of demonstrating an abnormality only in 50% of cases of proved disc disease. It is therefore logical to believe that in at least 60% of cases backache is discogenic. The lack of recognition of the great frequency of disc disease elsewhere is often due to faulty radiographic technique. Unless the lateral view of the spine is taken in true profile, thinning of a disc will often be missed.

From the pathological point of view it is known that discs may degenerate, that they may be injured, and that they may protrude. It is known that disc degeneration may be a predisposing factor to disc injury and protrusion; that injury to a disc may be followed by degeneration; and that a protrusion may subside spontaneously. The symptoms may therefore vary from time to time, according to whether the pathological basis at the moment is degeneration, injury or protrusion. These three conditions cause fairly characteristic syndromes, and these syndromes have been learnt by correlating the symptoms and signs with the radiological and operative findings. The symptoms, signs and treatment of lumbar intervertebral disc disease have been described previously (Young, 1948, 1949). Tonight it will be possible only to discuss them very briefly.

The degenerated disc is a soft disc, and being soft it is excessively mobile. This mobility can be demonstrated radiologically and at operation. As the disc is excessively mobile, every movement of the spine occurs first at the degenerated disc. This disc is constantly being subjected to strain, and this presumably leads to backache. The ache is worse whenever the patient places a strain on the loose disc, and the most common strain to which the disc is subjected is flexion. The patient will therefore complain that his back aches particularly on bending and on sitting. If the patient sleeps on a sagging bed he will often wake with backache, and the ache will decrease after he gets up. Examination will reveal tenderness over an interspinous ligament, and the ligament itself is sometimes depressed and slackened. The degenerated disc is a loose disc, and it must therefore be immobilized to encourage ligamentous shortening and eventual stability. If the patient wears a well-fitting support and does extension exercises to strengthen his spinal muscles, the ache will usually disappear. It is also necessary to avoid bending and lifting, and when the patient has to pick up something from the floor he should bend at the hips and knees and spare his back.

Disc injury is an extremely common condition, the injury frequently being a bending and lifting strain. Often the injury is quite a trivial one, and in these cases a thin disc is often found on radiographic examination; it would then seem that disc degeneration has predisposed the patient to injury. The injury probably damages the fibres of the *annulus fibrosus*, especially the fibres of the posterior part of the annulus. All movements tend to be painful, and flexion is especially affected as it places a strain on the torn structures. There is tenderness over the affected region. Temporary and sometimes permanent relief of pain can be obtained by injecting 20 millilitres of 1% procaine solution into the epidural space, and this is excellent treatment for the condition provided that the patient is kept in bed afterwards and not allowed to get about and do further damage to an anæsthetized back. The injured disc must be rested in a lordotic position in the early stages, and it must be supported as soon as the patient is allowed out of bed. If adequate rest and support are omitted in the early stages, then prolonged disability is much more likely.

Disc protrusion may be spontaneous or due to injury, and it may occur slowly or rapidly. The disc will protrude more when it is compressed, and the pain of disc protrusion is therefore worse on standing, in contrast to the pain of disc degeneration, which is worse on sitting. When, therefore, a patient tells you that he used to have backache on sitting but that he now has backache on standing, you may assume that he has had a degenerated disc and that part of the disc is now protruding. If the protrusion is a large one the patient will usually adopt a posture of flexion away from the protrusion—that is, flexion slightly forward and to the opposite side—in order to lessen compression of the protrusion. In such cases extension and flexion towards the side of the protrusion will cause pain. Disc protrusion may cause pain in the back only, but more commonly the protrusion compresses a nerve root, and there will then be pain in the distribution of that nerve root and usually some loss of sensation, loss of power and diminution of reflex activity. If the patient has no scoliosis, I presume that there is only a small protrusion and use a support. If the patient has a scoliosis of less than two weeks' duration, I treat it by infiltrating the sacrospinalis muscle of the affected side with 50 millilitres of 1% procaine solution to paralyse it, and then apply traction to both lower limbs, the head and shoulders being raised slightly on pillows. The traction and the posture open up the intervertebral space, and the muscular paralysis allows the space to open up more on the side of the protrusion than on the opposite side. This treatment usually abolishes the pain and deformity within forty-eight hours. If scoliosis has been in existence for two to six weeks this treatment is well worth trying, but abolition of the pain and deformity then frequently takes much longer. When the pain and deformity disappear, traction is stopped, the pillows are removed from beneath the head and shoulders and a small pillow is placed under the lumbar region to maintain it in a position of lordosis. When the patient is allowed out of bed it must be remembered that he has not recovered. He still has a degenerated disc and this will need support and exercises. Traction applied to the lower limbs stretches the anterior crural nerves and may make the pain worse in patients with protrusions involving the third or fourth lumbar nerve roots. In these cases traction should therefore be applied with the patient's hips slightly flexed. If traction fails to relieve the symptoms, if traction makes a fifth lumbar or first sacral root pain worse, if scoliosis has lasted for more than six weeks, or if there is paraplegia, then the protrusion is usually large and the disc should be removed.

Loose pieces of lamina lying free in the spinal canal have been found at operation by Dr. F. J. Clark. Such loose pieces of bone may cause backache or root pain, but we do not yet know how to diagnose their presence prior to operation. It is easy enough to recognize them at operation, as there is an irregularity in the shape of the affected lamina. The loose pieces are possibly derived from detached centres of ossification.

Spinal osteoporosis is common in women over the age of forty years, and it is not uncommon in old men. In the past I have noticed repeatedly that many patients with this complaint have had their uterus removed. Of my female patients with spinal osteoporosis, 40% have had a previous hysterectomy. Having noticed this, and having also noticed that a degenerated disc often causes no trouble until the patient has an operation performed in the lithotomy position, I can only state with regret that it is my opinion that gynæcologists seldom relieve backache but often cause it. The earliest radiological signs of osteoporosis are decalcification of the vertebral bodies and widening of the intervertebral discs. In a lateral radiograph of a normal spine the vertebral bodies appear white and the spinous processes

grey. In spinal osteoporosis decalcification appears to affect especially the vertebral bodies, which then appear grey and of the same photographic density as the spinous processes. The soft decalcified vertebral bodies allow the normally elastic discs to bulge into them. Widening of the discs is most frequently seen in the upper lumbar region, as the lower lumbar discs are often degenerated and inelastic and as a result the lower lumbar discs do not widen so frequently. Later decalcification and softening may lead to compression of individual vertebræ (which then become wedge-shaped or rectangular), to thoracic kyphosis and lumbar lordosis, or to scoliosis. Spinal osteoporosis may be found radiologically in patients who have never had an ache in their back. We must therefore admit that the condition may be symptomless. Metabolic studies show that there is a negative calcium balance in these patients, and the administration of œstrogens may convert this negative to a positive calcium balance (Albright, 1947). Administration of œstrogens to patients with spinal osteoporosis may relieve certain symptoms, and it is therefore reasonable to assume that such symptoms are due to the osteoporosis. I have found that symptoms which may be relieved by the administration of œstrogens are low backache perhaps radiating diffusely around the pelvis and to the thighs, lower thoracic backache perhaps radiating around the lower ribs, and aching around the shoulder blades. These patients often complain of cramps in the lower limbs at night, and these cramps are often relieved by administration of œstrogens and calcium. It is therefore reasonable to assume that the cramps are due to disturbance of calcium metabolism. There is diffuse tenderness over the spine and spinal muscles, and the tendon reflexes are often very easy to elicit. Œstrogens will often fail to relieve backache, particularly in those patients who have recent compression of a vertebral body or in those who have much deformity of the spine. In such patients a spinal support is necessary.

Osteoarthritis is a disease of diarthrodial joints. The vertebral bodies articulate with one another by discs and not by joints. Lipping of the vertebral bodies is often called osteoarthritis, but it is never due to that condition. It is nearly always secondary to disc degeneration. In the spine osteoarthritis affects only the occipito-atlantal, atlanto-axial, interlaminar, costo-vertebral and costo-transverse joints. At autopsy osteoarthritis of the interlaminar joints is not uncommon in middle-aged and elderly subjects, but radiologically it is rarely seen and clinically it rarely appears to cause symptoms except in the upper cervical region. Here the interlaminar joints are weight-bearing joints, and it is therefore understandable that osteoarthritis of these joints will cause pain. Below the upper cervical region the interlaminar joints do not usually partake in weight-bearing, and it is therefore understandable that below the upper cervical region osteoarthritis of the interlaminar joints may seldom cause pain.

Metastatic carcinoma is common in the spine. Here I would emphasize that it may exist without radiological signs, and it is a safe rule that, if there is a history of carcinoma, a patient should be regarded as suffering from metastatic carcinoma of the spine if he or she has persistent pain in any part of the back or neck, with or without radiation of the pain to a limb.

Small nodules of fat are often found over the sacro-iliac joints, particularly in plump middle-aged women. They are often symptomless. Copeman and Ackerman (1944) believe that pieces of fat herniate through the fascia and then become congested and painful. In more than one patient with proved disc protrusion I have felt tender fatty nodes on the same side as the protrusion and non-tender nodes on the opposite side. I do not think that these fatty nodes are an important cause of backache and I regard them as *sub judice*.

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Reviews.

THORACIC SURGERY.

IN "The Thoracic Surgical Patient", the author, Lew A. Hochberg, presents us with a comprehensive account of the indications for surgery, the pre-operative treatment, and the post-operative management of the thoracic surgical patient.[1]

There is a lack of proportion in the book; the great problems of thoracic surgery—neoplasms, bronchiectasis and tuberculosis—are dismissed in two short chapters, whereas such esoteric conditions as thrombi of the auricular appendage and the aortic arch anomalies have subsections to themselves.

The author states that debatable issues have been raised. They certainly have. Mention must be made of some. Few thoracic surgeons would agree with the suggested management of early post-operative fistula, nor would they countenance a post-pneumonectomy thoracoplasty to prevent the stomach being drawn up. Other contentious topics are the author's views on the management of paradoxical respiration, the recognition of post-operative atelectasis, the causes and management of "wet lung", and the management of *empyema thoracis*.

Certain rather unusual expressions are used. "The use of this modality", "subaqueous deflation" and "cognitive immediate care" are somewhat jarring to the reader used to more conservative English.

The most satisfying chapter is that devoted to rehabilitation. This is to be applauded, for of all the thoracic surgeon's aids this is the one most often overlooked.

There is an extensive bibliography from which the author has drawn freely, perhaps too freely. If the various post-operative complications had been illustrated by personal case presentations, including X-ray reproductions, instead of being described in text-book fashion, a greater purpose would have been served. Particularly is this the case in regard to the diagnosis of post-operative complications.

As it is, the book is a helpful contribution, but the monotonous text and the many controversial points prevent its being of real value to the general surgeon. It does fill a want, but it will be appreciated only by the experienced thoracic surgeon. It must be read with a critical eye. It is not for the occasional operator.

A LITERARY COLLECTION FOR A DOCTOR.

DR. ROBERT COOPE has undoubtedly enjoyed himself in gathering together his materials for "The Quiet Art: A Doctor's Anthology".[2] This is a delightful "literary collection", an alternative meaning for the word "anthology", though it might quite well be called a "collection of small choice poems" in prose. Dr. Coope has arranged his quotations under eight sections, beginning with "The Science and the Art" and ending with "At the Close of the Day" and finally "This Sanctuary of My Soul". There are usually two, sometimes three, items to a page, and rarely does one extend to more than a page. Each is introduced by a suitable and often pithy heading, as for instance that of "Sydney Smith's Hay Fever" before a delightful description of this complaint from a letter to his son-in-law, Dr. Holland, in 1835. "The membrane is so irritable that light, dust, contradiction, an absurd remark, the sight of a dissenter—anything gets me a-sneezing, and if I begin sneezing at twelve, I don't leave off till two o'clock. . . ." Or "Young Barbarians" which precedes a quotation from Luther Burbank's "The Training of the Human Plant", where he recommends that "Every child should have mudpies, grasshoppers, water bugs, tadpoles, frogs . . . trees to climb, brooks to wade in . . . various animals to pet . . . and any child who has been deprived of these has been deprived of the best part of his education." Again "Lazy Student" is the heading to Isaac Watts's "Divine Song" beginning:

> 'Tis the voice of a sluggard: I heard him complain—
> "You have waked me too soon; I must slumber again".
> As the door on its hinges, so he on his bed
> Turns his sides and his shoulders, and his heavy head!

[1] "The Thoracic Surgical Patient: Preoperative, Anesthetic and Postoperative Care", by L. A. Hochberg, M.D., with a foreword by F. B. Berry, M.D.; 1952. New York: Grune and Stratton. 9" × 6", pp. 376. Price: $8.75.

[2] "The Quiet Art: A Doctor's Anthology", compiled by Robert Coope; 1952. Edinburgh: E. and S. Livingstone, Limited. 7¼" × 5", pp. 294, with one illustration. Price: 12s. 6d.

Dr. Coope has cast his net wide. We have quotations from the Bible, from Plato, the Talmud, Samuel Johnson ("Advice on Holidays"), Oliver Wendell Holmes, Andrew Borde, Dr. John Browne, Osler, Bernard Shaw, George Eliot and a host of others, all with something good to say, all delightful to read. Old friends are met with again to be enjoyed with relish and new ones are presented to us to whom we shall hold fast. Sound advice, deep philosophy, the foundation of true religion, genial humour, quaint sayings, all find their place. This is a book to keep by the bedside and to give to friends.

HUMAN BLOOD GROUPS AND INHERITANCE.

THE authors of "Human Blood Groups and Inheritance" have attempted in a short book to place the principal features of the subject before the biology student and the intelligent lay reader.[1] Dr. and Mr. Lawler have produced a well arranged and readable account which should also be of value to medical students and graduates who are not concerned with the intricacies of blood group genetics and ethnology. Successive chapters cover the A_1 A_2 B O groups, the Rhesus blood group, the M N S system and other blood groups. The importance of blood groups in transfusions is well discussed and the chapter on their biological significance is excellently written.

The authors ask themselves in conclusion whether an early chapter on techniques should have been included, but claim that even such a small book would be incomplete if the reader were not allowed "to form some mental picture of what would otherwise be mysterious laboratory rites". The technical procedures outlined are not described in sufficient detail to allow them to be repeated, but do provide some understanding of the organization required in a research institute. Medical students and practitioners will find that the book provides an authoritative account of the major discoveries as well as an adequate historical review.

ATLAS OF TUMOUR PATHOLOGY.

SOME weeks ago several fascicles of an "Atlas of Tumour Pathology" were reviewed in these columns. They were part of an atlas prepared at the Armed Forces Institute of Pathology under the auspices of the Subcommittee on Oncology of the Committee on Pathology of the National Research Council of the United States. The introduction and three more fascicles have now been received.

In the introduction[2] it is stated that at the fourth International Congress for Cancer Research held in 1947 at St. Louis it was suggested that renewed attempts should be made to simplify and standardize the nomenclature of neoplastic diseases and to devise means toward aiding graduate and undergraduate teaching of oncology. This atlas is the eventual outcome of that suggestion. It is pointed out that an atlas of tumour pathology differs from a text-book in that it "aims to give preeminently a pictorial representation of the many structural variants which characterize the many kinds of neoplasms". We have already described the excellence of the half-tone pictures and photomicrographs in this atlas. It only remains to state that the fascicles will be issued in loose leaf form as they become ready for distribution—no particular order of issue will be observed.

Fascicle 6 of Section II deals with tumours of the peripheral nervous system[3] and is produced by Professor Arthur Purdy Stout. It is divided into five parts dealing with tumours of the peripheral nerves, tumours of sympathetic ganglia, tumours of paraganglionic cells, complex malignant neoplasms, and neoplasms of heterotopic central nervous system tissues. After an introduction on tumours of the peripheral nervous system in general, Stout proceeds to deal with the several groups in detail. He concludes with a useful set of references.

Fascicle 9 of Section III is devoted to teratomata[1] and the author is Professor R. A. Willis. Discussing nomenclature, he states that "teratoma" is the most suitable name for this class of tumour; its literal meaning—a malformation which is also a true tumour—is very appropriate. "Dermoid cyst" is in his opinion an unfortunate term and "embryoma" is a particularly bad name. Before proceeding to examine their histology, he deals with their classification and incidence and also with the hypotheses of their origin. Some of his photomicrographs are particularly fine. There are some useful references.

Fascicle 16 of Section IV deals with tumours of the carotid body and related structures (chemoreceptor system);[4] it is written by Philip M. LeCompte. Here again there is an introduction in which anatomy, embryology, nomenclature and so on are dealt with and then come sections dealing with tumours (*a*) of the carotid body, (*b*) of the aortic bodies, (*c*) of the *glomus jugulare* and *paraganglion tympanicum*, (*d*) arising in the *ganglion nodosum* of the vagus, (*e*) of the *paraganglion ciliare*. References are included.

A MANUAL OF PARASITOLOGY.

"A MANUAL OF PARASITOLOGY", by Mark M. Schapiro, is intended, as its subtitle states, for "medical students and beginners".[2] The author is a Fellow of the Royal Society of Tropical Medicine and Hygiene, London, and of the International College of Surgeons; and his book is commended, albeit with a slight reservation, in a foreword by Sir Philip Manson-Bahr. The reservation is due to the fact that in Manson-Bahr's opinion it is difficult to write an elementary text-book of parasitology: "It is probably much easier to compose a fully documented, critical and comprehensive account of the large numbers of tropical parasites that afflict mankind than to convey an easily intelligible knowledge of parasitology to students and beginners." Schapiro's little book is clear, well arranged, excellently printed and produced, and of a handy shape and size. In the opening sections the principles of parasitology and the parasites' method of attack are discussed. There follows a series of descriptions of the principal protozoan parasites of man and of the trematodes, nematodes and cestodes. The book is very well illustrated. A concluding chapter deals with diagnostic methods and the collection of specimens. Occasionally the style of the book is colloquial, but this is probably not out of place in a laboratory manual. There are several obvious misprints. The publishers have evidently taken the lessons of parasitology to heart, for an announcement on the title page states that the book is bound in "pyroxylin-impregnated, water-repellent, vermin-proof cloth". This is an excellent idea for laboratory text-books, especially if they are to be used in tropical climates, where cockroaches, silverfish and other devourers are especially wont to flourish.

MEDICAL DISORDERS DURING PREGNANCY.

IT is a pleasure to commend "Medical Disorders during Pregnancy",[3] by Clayton and Oram, to anyone remotely interested in these subjects. This book is a comprehensive, though not encyclopædic, description of the disorders of interest to the physician which might assail a pregnant woman. The type is clear, the illustrations are adequate and good, and each chapter and subsection concludes with a satisfactory list of recent references.

The short introduction to the book concerns the altering physiology of the female while pregnant. This section is concise yet not more detailed than necessary. The following chapter concerns the heart in pregnancy and includes a pleasing section on alterations in cardiac disorders from

[1] "Human Blood Groups and Inheritance", by Sylvia D. Lawler, M.D., and L. J. Lawler, B.Sc., with a foreword by R. R. Race, Ph.D., M.R.C.S.; 1951. London: William Heinemann (Medical Books), Limited. 7¼" × 5", pp. 94, with six text figures. Price: 3s. 6d.

[2] "Atlas of Tumor Pathology (Section II—Fascicle 6): Tumors of the Peripheral Nervous System", by Arthur Purdy Stout, M.D., 1949. Washington: Armed Forces Institute of Pathology. 10½" × 8½", pp. 58, with 56 illustrations. Price: 60 cents.

[3] "Atlas of Tumor Pathology (Section III—Fascicle 9): Teratomas", by Rupert A. Willis, D.Sc., M.D., F.R.C.P.; 1951. Washington: Armed Forces Institute of Pathology. 10½" × 8½", pp. 58, with 45 illustrations. Price: 50 cents.

[1] "Atlas of Tumor Pathology (Section IV—Fascicle 16): Tumors of the Carotid Body and Related Structures (Chemoreceptor System)", by Philip M. LeCompte, M.D.; 1951. Washington: Armed Forces Institute of Pathology. 10" × 8½", pp. 40, with 23 illustrations. Price: 45 cents.

[2] "A Manual of Parasitology for Medical Students and Beginners", by Mark M. Schapiro, M.D., M.S., with a foreword by Philip Manson-Bahr; 1951. New York: Grune and Stratton. 9" × 6", pp. 152, with eight illustrations. Price: $5.50.

[3] "Medical Disorders during Pregnancy", edited by Stanley Clayton, M.D., M.S. (London), F.R.C.S., F.R.C.O.G., and Samuel Oram, M.D. (London), F.R.C.P.; 1951. London: J. and A. Churchill, Limited. 8½" × 5½", pp. 350, with 28 illustrations. Price: 25s.

which the pregnant woman is as liable to suffer as her non-pregnant sister. These are discussed fully with tables for estimate of cardiac status and for mortality rates with varied methods of delivery, and a graph of expectation of life in rheumatic heart disease. The next chapter comprehensively outlines the features of renal and hypertensive disorders and associated physiological conditions. It must here be remarked that in these chapters particularly are the details of the management of the cases carefully annotated.

Chapters follow on respiratory diseases in pregnancy with particular reference to tuberculosis, on blood disorders during pregnancy and on alimentary disorders, particularly *hyperemesis gravidarum*. Diabetes in pregnancy is next discussed, including a mention of the scepticism in English schools concerning the apparently successful work of Priscilla White based on endocrine therapy. It is somewhat surprising that, in this chapter, more space is not given to a discussion on the pre-diabetic state and its treatment. Some, in this country, will not agree with the administration of glucose in the first twenty-four hours to the children born of a pregnant diabetic and will incline to favour a policy of dehydration for this period. Neurological disorders are considered and this chapter includes a long comment, with references, on the recently described entity now known as cerebral thrombophlebitis. One of the longest and most interesting chapters in the book is that written by Dr. Denis Hill on the psychiatric aspects of pregnancy. The inclusion of this chapter is indicative of the breadth of interest and scope of the whole work.

Notes on Books, Current Journals and New Appliances.

"FAMILY DOCTOR."

THE cover girl on the front of the September "Family Doctor", the British Medical Association's popular magazine, would finish high on the list of any beauty competition in which blatant health was an important qualification and the age limit was two years. Her portrait would grace any doctor's waiting-room table. The first section of the contents is "family reading", and contains an account of a visit to a blind school, an article on foot comfort for big women, delightful portraits respectively of a small boy getting into routine mischief, and of a general practitioner of the old school, and a charming recent portrait of last year's cover girl Rosemary. The second section is "mainly for mothers", who will be interested in articles on having a baby, why children tell lies, thumb-sucking and adolescent girls. The subjects of "medicine and health" articles include psoriasis, corneal grafting, body types (mesomorphs, endomorphs, ectomorphs), rheumatism, Rh-negative blood and first aid for a fractured pelvis. The fourth section, "your home and family", has regular features, including beauty and health, marriage guidance and home cooking. Altogether, this issue of "Family Doctor" offers a most generous bill of fare attractively presented.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"The Toxæmias of Pregnancy", by William J. Dieckmann, S.B., M.D.; Second Edition; 1952. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 10" × 7", pp. 710, with 85 illustrations and one colour plate. Price: £7 12s. 3d.

The first edition was published in 1940 and in this edition the author has reviewed reports published since then.

"Proceedings of the First Conference on Electrokymography: Held May 25-26, 1950, in Bethesda, Maryland, sponsored by the National Heart Institute", edited by Bert R. Boone, M.D., Frederick G. Gillick, M.D., Russell H. Morgan, M.D., and Morton J. Oppenheimer, M.D.; 1951. Washington: United States Government Printing Office. 9½" × 6", pp. 222, with 58 illustrations. Price: 75 cents.

The volume contains eleven physiological and clinical papers, with discussions, and also four "instrumental papers" with discussion. Six papers are presented by title and abstract.

"The Scalp in Health and Disease", by Howard T. Behrman, A.B., M.D.; 1952. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 10" × 7", pp. 566, with 312 illustrations. Price: £6 14s.

The author "approaches the problems of the hair and scalp from a fundamental anatomic and physiologic viewpoint".

"Personality and the Frontal Lobes: An Investigation of the Psychological Effects of Different Types of Leucotomy", by Asenath Petrie; 1952. London: Routledge and Kegan Paul, Limited. Sydney: Walter Standish and Sons. 9" × 6", pp. 200, with two illustrations. Price: 21s.

The investigations of the author were carried out on a series of seventy patients.

"Portrait of a Hospital, 1752-1948: To Commemorate the Bi-Centenary of the Royal Infirmary, Manchester", by William Brockbank; 1952. London: William Heinemann (Medical Books), Limited. 9½" × 7", pp. 228, with 54 illustrations. Price: 25s.

An important contribution to medical history.

"Vascular Diseases in Clinical Practice", by Irving Sherwood Wright, M.D.; Second Edition; 1952. Chicago: The Year Book Publishers, Incorporated. 8½" × 6", pp. 552, with 116 illustrations. Price: $8.50.

An attempt has been made to evaluate material which has become available since the first edition was published in 1948.

"Logan Turner's Diseases of the Nose, Throat and Ear", edited by Douglas Guthrie, assisted by John P. Stewart, with the collaboration of Charles E. Scott, A. Brownlie Smith, I. Malcolm Farquaharson, I. Simson Hall, R. B. Lumsden and J. F. Birrell; Fifth Edition; 1952. 9" × 6", pp. 492, with 246 illustrations, nine in colour. Price: 42s.

The fourth edition was published in 1936.

"The Medical Inspection of School Children", by Edgar Henry Wilkins, M.B., B.Ch. (Dublin), D.P.H. (London); 1952. London: Baillière, Tindall and Cox. 8½" × 6", pp. 232, with 18 illustrations. Price: 16s.

The author tries to consider all the questions, social as well as medical, which arise when judgement is being passed on a child's health.

"Architectural Principles in Arthrodesis", by H. A. Brittain, O.B.E., M.A., M.Ch., F.R.C.S., with a foreword by Harry Platt, M.D., M.S., F.R.C.S., F.A.C.S. (Hon.); Second Edition; 1952. Edinburgh and London: E. and S. Livingstone, Limited. 10" × 7½", pp. 208, with 257 illustrations, some in colour. Price: 42s.

The author is ten years older than he was when he published the first edition and is more diffident than he was in expressing his views. In this edition the book has been almost entirely rewritten.

"Prostatectomy: A Method and its Management", by Charles Wells; 1952. Edinburgh and London: E. and S. Livingstone, Limited. 10" × 7", pp. 110, with 72 illustrations. Price: 24s.

The author, who is professor of surgery in the University of Liverpool, describes prostatectomy as he practises it.

"Lumbar Disc Lesions: Pathogenesis and Treatment of Low Back Pain and Sciatica", by J. R. Armstrong, M.D., M.Ch., F.R.C.S., with a foreword by H. Osmond-Clarke, C.B.E., F.R.C.S.; 1952. Edinburgh and London: E. and S. Livingstone, Limited. 10" × 7", pp. 236, with 56 illustrations, a few in colour. Price: 42s.

The book is "the product of accurate and inquisitive clinical observation, a comprehensive survey of the literature and an experience of more than a thousand well documented operations".

"History of the Royal Medical Society, 1737-1937", by James Gray, M.A., F.R.S.E., edited by Douglas Guthrie, M.D., F.R.C.S.E., with a foreword by Robert Hutchison, Bart., M.D., LL.D., F.R.C.P.; 1952. Edinburgh: The University Press. 10" × 6½", pp. 366, with seven illustrations. Price: 42s.

A history of the oldest medical society in Great Britain.

"Society and the Homosexual", by Gordon Westwood, with an introduction by Edward Glover, M.D.; 1952. London: Victor Gollancz, Limited. 7½" × 5", pp. 192. Price: 9s. 6d.

An attempt "to evaluate the social implications of homosexuality".

The Medical Journal of Australia

SATURDAY, SEPTEMBER 13, 1952.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: surname of author, initials of author, year, full title of article, name of journal without abbreviation, volume, number of first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

ALCOHOL AND BODY HEAT.

THE study of illusions of sensory perception, now actively pursued in experimental psychology, goes back far in history. Aristotle showed that, if the index and middle fingers are crossed, a single object or prominence, such as a knuckle or point of the nose, in contact with the displaced fingertips will give the impression of being double. The eye offers an extended array of impressions which are at variance with physical reality, and the Parthenon at Athens is a splendid example of these visual illusions being delicately counteracted in architectural design. When it comes to colour, the eye suggests the methods of the politician, for compromises are made which have no physical basis. Even the ear, which has the faculty of accurate analysis and therefore resembles the man of science in its honesty, can occasionally be tricked as when a jangle of notes emerging from a bell awakes a sensation of a fundamental which is really not there. Our feelings of warmth and cold are similarly open to illusion. On a hot day a hairdresser will apply a lotion containing menthol to the scalp of a customer who will be gratified by the sensation of chill which the menthol creates, not by any lowering of temperature but by stimulating the receptors for cold, or more correctly stated, for falling temperature. Actually the scalp may have risen in temperature through the hairdresser's ministrations, but of this the customer is blissfully unconscious. Certain spices arouse sensations of warmth in the mouth. The clown in Shakespeare's *Twelfth Night* remarks: "Yes, by Saint Anne, and ginger shall be hot i' the mouth too", and when Grumio is teasing Katharina in *The Taming of the Shrew* the reference to mustard as "hot" takes a special place in the action of the comedy. We all have met persons who have added Worcester sauce or pepper to soup on a cold day on account of the added warmth which they feel, but which is totally non-existent in physical reality.

Of all illusions of body temperature none is so pronounced, so deceptive and so dangerous as the belief that external cold can be combated by alcohol. The true action of alcohol in this condition is really simple. The chill skin is flooded with blood drawn from the internal and sheltered regions of the body and a happy glow of warmth is felt. The unemotional thermometer tells us that the body temperature actually falls as a result of the taking of alcohol in a cold environment. Far better is it for the general welfare that the skin and extremities should remain cold than that the vital viscera should give up a portion of their heat; but to this salutary adjustment alcohol is antagonistic. At one time the good folk of London were perturbed at a number of instances of cerebral and cerebellar attacks being mistaken for the effects of drink, and the serious suggestion was made that the policeman should carry a clinical thermometer, for it was pointed out that in the central nervous system disorders the body temperature is usually normal, whereas in the drunk it is invariably subnormal. Many times have young men, flushed with drink, attempted out of bravado or as a result of a wager or challenge, to swim across a stretch of cold water and succumbed in the effort, a task which they could easily have achieved had they been sober. The famous dogs of the hospice of the Great Saint Bernard Pass are known in repute to every child. If it is true that each dog carried a flask of brandy then it may be said at once and with emphasis that no worse treatment of the chilled mountain wayfarer could be devised—far better today would be a "Thermos" of hot milk. That this idea of alcoholic succour is prevalent is shown in a recent number of a well-known Australian weekly. "A traveller, by the faithful hound, half buried in the snow was found", like Longfellow's "Excelsior" boy, but in this case, according to the amusing drawing and legend, the victim is not a youth with ideals, high at least in altitude, but a stubble-bearded derelict who hands back to a perplexed dog a depleted pannikin, saying: "The same again, Miss." In rescue work, whether in shipwreck or exposure to cold on land, alcohol should be avoided as a veritable poison. If the rescued persons are brought into a hot room or given a warm bath some justification for a modest dose of alcohol might be advanced, but certainly not before. Many a life has been needlessly thrown away through the belief that alcohol gives the body heat; as already stated, it is the skin being warmed at the expense of the internal organs which begets this illusion. A fair number of survivors of Napoleon's retreat from Moscow published accounts of their hardships, and in these harrowing memoirs one reads how the soldiers killed and cooked horses, using gunpowder for salt, and how they were overjoyed if by some rare chance they obtained a bottle of brandy. It may be asserted with confidence that there would have been more survivors if brandy had been absent. The poor wretches often drank the stuff undiluted and became intoxicated, not realizing that alcoholic stupor in a cold environment courts death. An extra tot of rum is welcomed by the sailor exposed to icy squalls or by the soldier in modern warfare in the midst of a bitter winter, but no possible good can be the outcome apart from a small psychic factor. It is the plain duty of the medical profession to issue warnings against this mistaken and often fatal notion; but even in the ranks of the profession a few may be found who will be glad of

the skin warmth which alcohol gives them when they are exposed to cold, and who will forget the drain of heat from vital internal organs on which this feeling of comfort is based.

The high æsthetic qualities of vintage wines and the enhancement of social well-being which a moderate indulgence in alcohol can bring about are the best arguments against a fanatical teetotalism. Possibly also the liberal vasodilatation of skin vessels might be adduced as physiologically helpful in the tropics, but as a remedy against cold alcohol should be shunned. The illusion of warmth may partly explain an orientation respecting climate and drinking. Drunkenness is rare in Mediterranean lands, but increases northwards. Napoleon did not escape from the bitter regrets and other miseries of exile and defeat by recourse to the bottle like "Bonny Prince Charlie". Garibaldi was often in difficulties arising from the inebriety of his British Legion; he paid frequent tributes to their valour, but the intemperate habits of their homeland which they carried into southern Italy often led to trouble. The attitude of Australians towards alcohol has undergone considerable amelioration since "Max O'Rell" wrote his amusing book, and it is to be hoped that the medical profession, by making known the actual facts, will help in this worthy cause.

Current Comment.

THE TREATMENT OF TUBERCULOUS MENINGITIS.

REAL progress has been made of recent years in the treatment of tuberculous meningitis, though it cannot be said that the disease has been conquered. After a period of trial and error, during which many of the results were disappointing, the value of streptomycin is fairly generally accepted. Work done by Medical Research Council teams, notably under the leadership of the late Sir Hugh Cairns, has played a major part in establishing this position. Reports of the work of two such teams were referred to in these columns on July 3, 1948. From those reports it was clear that despite the unpredictability of the results in many cases and the appreciable proportion of failures, streptomycin therapy should be tried, at least in early cases, and that it should be persisted with and abandoned only in extreme circumstances. Mention was also made of the favourable report of Lincoln *et alii* on the use of a combination of streptomycin and a sulphone, the idea being to exploit the effectiveness of streptomycin in the early stages and to fall back on the less toxic sulphone for the later stages. Further evidence of the value of streptomycin treatment and comment on important particular details are contained in a recent paper by A. R. Somner.[1] He describes the treatment with streptomycin of 26 subjects of tuberculous meningitis at Southfield Sanatorium, Edinburgh, between October, 1948, and May, 1951. Of the 14 patients still alive in January, 1952, 12 had completed treatment and made a good recovery; 10 had been observed for over twelve months since the ending of treatment. Other aspects of Somner's discussion will bear examination in the original paper, which most of our readers will have. Reference is made to the dangers of dihydrostreptomycin in causing deafness. The value is described of the sugar content of the cerebro-spinal fluid in the assessment of progress, and it is suggested that treatment should never be discontinued so long as this level is below 50 milligrammes per 100 millilitres. The significance of the protein and cell contents is discussed, and it is pointed out that neither of them may return to normal for many months after treatment has ceased. Somner reports that intrathecal administration of streptomycin was found to be an additional factor in the development of spinal block in some cases. He also describes symptoms and signs resulting from the alternative use of the cisternal route.

Another recent report of interest contains the provisional results of the treatment with isonicotinic acid hydrazide of four children suffering from tuberculous meningitis. It is made by W. P. Sweetnam and E. F. Murphy.[2] All four patients had been followed up for ten weeks when the report was written. In one case treatment had been stopped at the end of eight weeks, and in the other after nine weeks; in the remaining two cases it was still continuing. Three of the children were treated initially with streptomycin and later with isonicotinic acid hydrazide, or with the two together. The results are described as equivocal. One child was treated with isonicotinic acid hydrazide alone, with dramatic improvement. She was clinically well in a week, her cerebro-spinal fluid was normal in eight weeks, and it remained so for at least two weeks after cessation of treatment. Relapse is regarded as still possible, but unlikely. There were no signs of drug toxicity, other than a temporary fall in hæmoglobin level, but signs of intolerance appeared when the dosage was increased to 16 milligrammes per kilogram of body weight (twice the dosage used as a routine). Sweetnam and Murphy do not hesitate to say that four patients are too few and ten weeks too short for firm deductions to be made, but the work is worth following up. The one dramatic result was not the sort of thing that would be expected from streptomycin therapy, and from other points of view isonicotinic acid hydrazide has obvious advantages over streptomycin, especially for children. Notably, it is given orally as a pleasantly flavoured syrup, in contrast with the hateful intramuscular and intrathecal injections of streptomycin. The possible toxicity of isonicotinic acid hydrazide requires more attention, and it is yet justified to use the drug only with caution. Nevertheless its possibilities should be further explored, not only in the wider field of tuberculosis, in which it has had more attention, but also in the particularly important aspect with which Sweetnam and Murphy's paper deals. Incidentally, they remark in their paper that the clinical results published so far (in relation to isonicotinic acid hydrazide) appear to be confined to the treatment of chronic respiratory meningitis. It seems fair to point out that A. J. Proust in a letter to this journal earlier in the year[3] referred to encouraging results in the treatment with this drug of four patients with tuberculous meningitis at the Baltimore City Hospitals and the Johns Hopkins Hospital, Baltimore.

[1] *British Medical Journal*, August 16, 1952.

[1] *The Lancet*, July 26, 1952.

[2] THE MEDICAL JOURNAL OF AUSTRALIA, May 3, 1952.

A SURVEY OF CANCER IN LONDON.

IN 1935 the British Empire Cancer Campaign appointed a Clinical Cancer Research Committee, which decided that there should be an inquiry limited to the London area in the first place but enlisting the help of all London hospitals and the medical services of the London County Council. By the end of 1938, 8480 case sheets were received and these were subjected to expert analysis. The voluminous report is now available.[3] As Sir Heneage Ogilvie remarks in an introduction, "the analysis here presented is something unique in scientific literature. Never has so large a series, entirely unselected, representing the results of research not by one expert but by the staffs of many hos-

[3] "British Empire Cancer Campaign: A Survey of Cancer in London: Report of the Clinical Cancer Research Committee", by W. L. Harnett, C.I.E., M.D., F.R.C.S., Lt.Col. I.M.S. (Ret.), with a foreword by the Right Honourable Lord Horder, G.C.V.O., M.D., F.R.C.P., and an introduction by Heneage Ogilvie, K.B.E., D.M., M.Ch., F.R.C.S.; 1952. London: The British Empire Cancer Campaign. 10" x 7¾", pp. 840, with 20 text figures. Price: £2 10s. (cloth bound) and £2 5s. (paper bound).

pitals been collected. Never has an analysis so detailed, so carefully checked and so impartial, been presented." This is a strong claim, but a perusal of the report shows that it is fully justified. Lord Horder in a brief foreword tells us that this report "deals mainly with the question of differential treatment and its results". The five-year follow-up should be of exceptional service in the study of the treatment of this scourge. Every organ of the body attacked by cancer comes into detailed review. As an example we may take cancer of the nasal cavity, paranasal sinuses and naso-pharynx, which is dealt with under the following heads: number of cases, site of growth and sex ratios, age distribution, heredity, occupation and social class, relevant past history, history of syphilis, first symptom, interval from first symptom to first consulting a doctor, advice and treatment before admission to hospital, symptoms on admission to hospital, findings on examination, involvement of lymph nodes, transillumination of antrum, X-ray findings, exploratory puncture of antrum, Wassermann reaction, remote metastases, general condition, clinical stages, methods of treatment and five-year results, analysis of methods of treatment by stages, duration of symptoms at time of commencing treatment, five-year follow-up for all cases, actuarial estimation of survival after treatment, biopsy, pathological report, basis of diagnosis, other primary growths, cause of death in 126 patients, autopsy, recurrent cases.

There is an admirable restraint in basing conclusions on the data presented. For example, in a recent cancer publication it was stated that the greater number of males over females suffering from cancer of the larynx might be due to the male larynx being a secondary sex structure. From this report we learn that cancer of the pharynx also displays pronounced preponderance in the male, and certainly the pharynx cannot be regarded as a secondary sex organ. Those seeking information on the possible correlation of cancer with social class or heredity will find material here which will not lend itself to dogmatic assertion. When incidence is plotted against age of patient the sharpness of the peak at the "cancer period" is most striking, and one cannot avoid the conclusion that a causative factor will surely be found which explains this specific liability. In sarcoma of soft tissues, it may be noted, there are two peaks, one in the seventeen to eighteen years period for both sexes and a second in the fifty-seven to fifty-eight years period for males and the sixty-seven to sixty-eight years period for females. The British Empire Campaign and all connected with this noble survey are to be warmly congratulated and thanked.

MALIGNANT MELANOMA OF THE SKIN.

MELANOMA is, in E. H. Molesworth's striking words, "one of the most viciously malignant tumours that affect the human body".[1] Its origin from the pigmented mole is well known, but just which types of mole are likely to undergo malignant change is less generally understood. In this regard a simple classification of pigmented moles brought forward by F. D. Weidman[2] is helpful. Four kinds are listed, with a possible fifth. The first is seborrhœic keratosis, examples of which are commonplace and numerous in elderly people. Occurring in the skin of the young adult, this lesion may be highly atypical (solitary, submerged, secondarily infected, ulcerated). Weidman states that it almost never undergoes malignant change, but when there is any doubt at all about the diagnosis microscopic investigation is imperative. The second type is the blue nævus, which is usually diagnosed satisfactorily because it is slaty or blue-black in colour, not elevated and seldom multiple. It practically never becomes malignant. The common brown mole is the third type. This may be congenital, but more commonly it does not appear until childhood or later. It is the commonest nævus of early life and is usually multiple. It is benign, and when it is traversed by hairs (hairy mole) its benignancy is confirmed. Histologically speaking, it is intradermal. The fourth type, the blue-black pigmentary nævus, is the one of dire significance. It may be the forerunner of malignant melanoma. Usually it is elevated or even verrucous, its size-range is large, even to the proportions of a patch, it has a more or less irregular outline, and certain portions may be brown instead of black. Thus it is not homogeneous, either in colour or in configuration, in the manner that the simple blue nævus is. It differs from the common brown mole in that certain portions are slaty or black. In most cases the lesions remain benign throughout life, but they should excite particular concern when located at places subject to continuous irritation or trauma, such as on the feet, waist or collar line. This lesion is, histologically speaking, the dermo-epidermal or junction nævus. It is to be noted that in many cases these lesions are not distinctive, particularly the smaller ones, which may be brown only; in such cases, the nature of the lesion may be established only by biopsy and microscopic examination. Belonging in principle to this fourth group, but situated superficially, are the lentigines, a term which connotes freckles. These are the multiple moles which crop out in childhood or early adult life, are distributed widely and haphazardly on the body, and are variously brown to black in colour. They are not likely to be patchy, and in size they vary up to the diameter of a pea. They are potentially malignant.

The most important feature in the recognition of malignant change is, as Weidman states, a history of recent or sudden enlargement of the lesion with increased pigmentation. When these changes are attended by ulceration and bleeding the evidence is almost proof positive. The enlargement of regional lymph glands signifies the occurrence of metastasis, and examination of these structures should not be omitted in any suspected case. In discussing prognosis, Weidman points out that the ways of malignant melanomata are as unpredictable in this as they are in many other respects. Those on the feet are the most dangerous of all and may be hidden between the toes. As regards treatment, he uses a combination of radiation therapy and surgery—preferably electrosurgery, with wide excision followed by high voltage X-ray therapy. Few will quarrel with this provided that the emphasis is on surgery. The value of irradiation is disputed (melanomata are nearly always radio-resistant) and certainly it should never be relied on as a primary measure. Weidman describes it as little short of criminal to employ caustics, solid carbon dioxide, electrolysis or tying a string round a pedunculated lesion, or to give treatment at short intervals. To this might be added E. H. Molesworth's warning that diathermy applied to pigmented moles or early melanomata is "an unspeakable menace". This measure, he states, has been responsible for several terrible and unnecessary tragedies by inducing an abrupt malignant change and wide dissemination of the growth. With regard to melanomata occurring before puberty, Weidman quotes the view of Spitz that "since metastases from juvenile melanomas occur only rarely, conservative surgery, rather than radical surgery usually indicated for adult melanomas, seems justified". No doubt this view can be defended, but it certainly should be treated with caution. In their book on skin tumours J. J. Eller and W. T. Eller[1] quote the statement of G. W. Taylor and his associates that they have seen a number of children with regional node metastases. Taylor *et alii* do not employ routine regional dissection in children, preserving it for those cases in which obvious metastases are present. Eller and Eller make no comment on this, but immediately after the quotation, in a new paragraph, state simply that the only appropriate method of treating malignant melanomata is by wide surgical excision. Indeed, all authorities on this subject agree that early and adequate surgical excision offers the only, though a very real, chance of cure. Failure to realize this has resulted in many unnecessary tragedies, such as the one reported in this journal on June 7, 1952, by V. J. Kinsella. There still appears, however, to be a difference of opinion in some cases on what is adequate excision.

[1] "An Introduction to Dermatology", Second Edition, 1944.

[2] *New York State Journal of Medicine*, September 1, 1951.

[1] "Tumours of the Skin", Second Edition, 1951.

Abstracts from Medical Literature.

DERMATOLOGY.

Topical Œstrogen Therapy and Acne Vulgaris.

A. J. PHILIP (*New York State Journal of Medicine*, May 15, 1951) has used in the treatment of *acne vulgaris* a lotion containing 1·75 milligrammes of micronized diethylstilbœstrol dilurate per gramme when evenly dispersed. The vehicle consisted of zinc oxide, talc, glycerin, water and isopropyl alcohol. In general, from two to four grammes of the lotion were applied as a thin film covering the entire facial area each morning, and in some cases night and morning. Thorough washing with soap and water was carried out prior to the application of the lotion. After six weeks the amount of lotion was reduced to a minimal maintenance level. Of a series of 36 males of adolescent age, 33 obtained excellent results. The same medication applied in a series of 48 female adolescents yielded only three patients with excellent results and four with good improvement; negligible results occurred in the rest.

Pemphigus and Heparin.

J. P. MAGNER, R. CAMPBELL MANSON AND A. PEPPLE (*Archives of Dermatology and Syphilology*, September, 1951) present observations suggesting that heparin possesses the ability to induce remission in cases of pemphigus. The various types of pemphigus are described in brief. The authors state that the diagnosis of pemphigus is based on the appearance of the individual early lesions, in which there is no zone of inflammation or induration, as in *erythema multiforme*, no combination of vesicles, papules and pustules, as in *dermatitis herpetiformis*, and no evidence of infection, as in *impetigo contagiosa*. Many cases of pemphigus are characterized by the ease with which normal-appearing epidermis may be avulsed in response to pinching or rubbing (Nikolsky's sign). The bullæ in pemphigus are usually situated between the superficial and the deep layers of the epidermis or at the dermis-epidermis junction, superficial to the rete pegs. In the hereditary affliction, *epidermolysis bullosa*, the tissue separation may occur in the deep part of the epidermis or in the dermis (corium). In the latter disease trauma to the skin is a supplemental factor in the development of the lesions. Consideration of this factor in a condition in which there is presumably an hereditary defect in "cement substance" caused the authors to speculate on the probability of an acquired but identical defect in pemphigus. They state that the studies of investigators in rheumatic diseases indicate that all connective tissue is composed of interfibrillar substances and fibrillar material. Of the former, two components are distinguished, the amorphous and viscous ground substance and cement substance proper. Hyaluronic acid and chondroitin have been isolated from these components. Both these isolated mucopolysaccharides are inactivated by the enzyme hyaluronidase. Bullæ have been produced by the intradermal injection of hyaluronidase. On the theoretical basis that an acquired defect in pemphigus might be an analogue to the induced defect in experimental rheumatic diseases, the therapeutic use in pemphigus of a substance which inhibited the action of hyaluronidase was weighed. Of such substances the following were considered: flavones, gentisuric acid salts, heparin, crude vitamin *C*, corticotrophin (ACTH) and cortisone. Because of its availability in a form for parenteral administration, heparin was chosen as the agent for therapeutic trial. Briefly summarized is a report of a case in which the diagnosis of pemphigus was concurred in by the authors' dermatological staff. Prior to treatment with heparin the patient had been given various forms of treatment without avail. Intramuscular injections of heparin of delayed absorption type were then given, after application of heparin sodium twice daily to the antecubital area of the right arm as a test to ascertain whether or not hæmorrhagic manifestations might result from its use (this was continued for several days, but there was no increased tendency towards hæmorrhage). Administration began with a dose of 200 milligrammes daily, the coagulation time during twenty days of therapy ranging from 10 to 43 minutes, and within four days practically all lesions had disappeared. The authors hope that an induced rather than a spontaneous remission was observed. They state that whether the administration of heparin in itself brought about correction of the cement-substance defect, or whether improvement was due to an interrelation between superficial application and parenteral administration, will not be clear until more cases are observed.

Skin Tolerance to Antihistaminic Drugs.

S. MONASH AND A. GUIDUCCI (*New York State Journal of Medicine*, May 15, 1951) state that the ingestion by mouth twice daily for one week of the usual dosage of "Pyribenzamine", "Chlortrimeton", "Thephorin" or "Benadryl" results in increased tolerance to the drug taken. The authors measured the antihistaminic effect of the drug by its action on wealing resulting from the introduction of various concentrations of histamine phosphate into the skin by means of iontophoresis. It was found that whereas the first dose of the drugs mentioned produced a considerable change in the histamine reaction, a similar dose given after one week's ingestion of the drug had no effect, or very little, on the same reaction. The question arose whether the ingestion of one drug resulted in increased tolerance to that drug alone or to other antihistaminic drugs as well. To determine this, a number of patients were given an antihistaminic drug in the usual dosage three times a day for one week; they were then given double the dosage of a different antihistaminic drug and the reaction to histamine phosphate was determined by iontophoresis at intervals after the drug was taken. The threshold reaction, the lowest concentration of histamine phosphate which produces follicular wealing, was first obtained. This usually varied from 1:1,000,000 to 1:5,000,000. From one to four hours later the reaction was again measured. If the drug had an antihistaminic effect it was then found that the threshold concentration no longer produced wealing, but it was necessary to employ a more concentrated solution, such as 1:800,000 or 1:500,000, to produce the same effect. If the drug had no effect, the subsequent reactions to histamine were approximately the same as the threshold reaction. As a result of these experiments the authors found that the ingestion of an antihistaminic drug for one week did not result in increased tolerance to a second antihistaminic drug. However, ingestion of the latter drug during the following week did result in increased tolerance to it. In order to obtain the maximum benefit from antihistaminic therapy the authors state that it is advisable to change to a different antihistaminic drug at approximately weekly intervals and to repeat the use of a drug only after an interval of four months.

Cortisone in the Treatment of Cutaneous Diseases.

M. J. COSTELLO (*New York State Journal of Medicine*, September 1, 1951) reports on over 60 patients with 20 skin diseases treated with cortisone. Eight subjects of *pemphigus vulgaris* were treated, four with and four without improvement. Patients with other rare bulbous diseases, such as *dermatitis herpetiformis* and *epidermolysis bullosa*, responded indifferently. Patients with *erythema multiforme* responded well. One patient with the systemic type of *lupus erythematosus* did not improve; another with associated thrombocytopenic purpura improved rapidly with cortisone, but relapsed after four weeks' continuous treatment. Some patients with the localized discoid chronic type of *lupus erythematosus* improved with cortisone, but relapsed later. Patients with *psoriasis arthropathica* responded favourably. A patient with severe seborrhœic dermatitis made an excellent recovery in six weeks with complete disappearance of the eruption, but another showed no improvement. Of 17 patients with common types of eczema, including neurodermatitis and atopic dermatitis, 12 improved and five did not. Of seven patients with generalized neurodermatitis, six improved and one did not. Several patients treated for drug eruptions, especially those following sensitivity to penicillin, improved within twenty-four hours after administration of cortisone. The author considers *dermatitis medicosa* of this type one of the main indications for cortisone therapy. Patients with *periarteritis nodosa* respond well to cortisone while the drug is being administered. Those with *mycosis fungoides* may respond to initial doses of cortisone, but relapse as soon as the drug is discontinued. The author states that the main indication for the use of cortisone is in the treatment of severe acute *dermatitis venenata* and *dermatitis medicamentosa*, especially in the severe urticaria and angio-neurotic œdema following penicillin and other types of antibiotic therapy. Cortisone is of no value in the treatment of most cases of *psoriasis vulgaris*, *alopecia areata*, keloids and *periadenitis mucosa necrotica recurrens*. The therapeutic effect of cortisone may wane or disappear when the drug is discontinued. Then the original pathological processes may be accelerated, so that the patient's cutaneous disease is worse than before (rebound phenomenon). Mild biological or toxic symptoms attributable to cortisone occurred in 55% of patients treated and severe toxic manifestations in 15%. In most cases all the mild and many of the severe toxic effects were reversible when the drug was discontinued.

UROLOGY.

Urethral Caruncle.

J. H. LONG (*The Urologic and Cutaneous Review*, October, 1951) states that the ætiology of urethral caruncle is obscure. Probably irritation or infection is the basic factor. It is the most common tumour of the female urethra, and is more common in women past the age of forty years. Grossly it is a brilliant red, soft growth, with either a narrow pedicle or a broad base. Microscopically, the histological picture is at first sight startlingly like that of a malignant growth, but on more careful examination the cells are seen to be of normal architecture, with no evidence of abnormal nuclear activity. The cell pattern is stratified, squamous or transitional, and the epithelium dips into the stroma, forming crypts or masses of cells resembling the arrangement often seen in malignant tumours. The stroma is of a loose, fibrous variety, containing a profusion of thin-walled blood vessels, and is usually heavily infiltrated with inflammatory cellular elements. Occasionally malignant change does tend to occur in this abnormal cell arrangement. Caruncle is most commonly confused with a protruding mass of red, infected mucosa which is due to senile atrophic changes and which responds to treatment with œstrogen cream. If it does not so respond biopsy is indicated. Ordinary benign caruncle should be excised completely, with hæmostasis by electrocoagulation, and the tumour sent for biopsy. The area should be observed every three months for one year after operation in order to check on possible local recurrence.

Adrenal Cortical Carcinoma in Children.

R. A. GARRETT (*The Journal of Urology*, October, 1951) agrees with the classification of adrenal cortical carcinoma in children, based on the clinical manifestations of hormonal activity, put forward by Walters, Cahill and other workers recently. The classification is as follows: (i) Non-hormonal, no endocrinological activity being displayed. (ii) Androgenic. (iii) Œstrogenic—those elaborating excess of feminizing steroids. (iv) Androgenic *plus* the effect of other metabolizing hormones, the clinical features of masculinization being displayed as well as those of Cushing's disease. (v) Metabolic tumours without androgens—that is, those producing Cushing's syndrome alone. (vi) Those causing a single metabolic disorder. The author states that the physiology underlying the clinical behaviour of such tumours is very complex. Adrenal cortical steroids isolated to date are numerous, and their interrelation is not properly understood. There appear, however, to be three main groups functionally: (i) those which stimulate secondary sexual characteristics—that is, œstrone and testosterone; (ii) those concerned with regulation of electrolyte balance—that is, desoxycorticosterone; (iii) those concerned with carbohydrate, fat and protein metabolism—that is, corticosterone, dihydrocorticosterone and others. At a large children's hospital, during a twenty-six years period, with 83,220 admissions, there were only four cases of authenticated adrenal cortical tumours, all of which proved to be carcinoma. Numerous other children with variations of the adrenal cortical syndrome were studied and either they were proved to be suffering from cortical hyperplasia or else an operation to ascertain the true identity of the lesions was refused. The most commonly met tumours are androgenic ones, with or without Cushing's syndrome. In diagnosis it must be remembered that cerebral lesions in and around the pineal body, as well as the hypophysis, may cause excess production of adrenocorticotropic hormone or of gonadotropic hormone and thus mimic the primary adrenal cortical syndrome. Skull radiography and perirenal air insufflation are valuable aids to diagnosis. Pyelographic studies may reveal displacement on the affected side. Modern methods of androgenic determination, with fractionation into α and β components, together with œstrogenic assay, allow an increasingly accurate evaluation of the functioning of these tumours. A detailed description is given of the four authenticated cases of adrenal cortical carcinoma. The author states that prognosis depends on the type of neoplasm. Non-functioning tumours often manifest themselves by mass alone, and therefore it is usually too late for surgical extirpation. Simple œstrogenic and androgenic tumours are susceptible of early detection and their removal is seldom accompanied by acute adrenal insufficiency. Tumours with Cushing characteristics, while often discovered early, may prove fatal because of acute adrenal insufficiency after their removal.

Clinical Management of Advanced Prostatic Carcinoma.

W. P. HERBST (*Urological Survey*, April, 1951) makes a general review of the present position of the treatment of prostatic carcinoma and states that this is one of the most interesting chapters in the history of medicine. The earliest contribution along hormonal lines in gonadal carcinoma goes back to the latter part of the nineteenth century, when J. W. White, of Philadelphia, castrated patients with prostatic obstruction, and a group of British surgeons castrated women for advanced carcinoma of the breast. Both groups of workers claimed favourable results in many cases. In 1941, C. Huggins and co-workers reported on the results obtained by castration and endocrine treatment in cases of prostatic carcinoma. About the same time the author made the first report on the results of therapy by œstrogenic hormones. In 1950 Reed Nesbit and 13 other urologists compiled a most comprehensive joint statistical report on 1818 cases. This report concludes that patients who come under treatment fairly early and who have orchidectomy as well as œstrogen from the start have a longer survival rate than those receiving œstrogen alone. Patients who respond well to castration and/or œstrogen therapy live more comfortably and longer than patients not treated by these methods. Patients who fail to show response to treatment have survival rates just as poor as those in a completely untreated control group. Apart from early cases altogether, if metastases are known to be present, castration is significantly more effective than stilbœstrol therapy. No one treatment is more effective than another in the treatment of relapse. The estimation of the serum acid phosphatase level is of strictly limited value; it does no more than indicate the clinical trend in some cases. When prostatic cancer has not metastasized the serum acid phosphatase value is usually normal and it is therefore of no value in making a differential diagnosis when it is most needed, namely, before the period of inoperability. Radical removal of prostate and vesicles is strictly indicated only when the carcinoma is actually confined to those organs.

Squamous-Cell Carcinoma of the Renal Pelvis.

O. J. OBERKIRCHER, W. J. STAUBITZ AND M. S. BLICK (*The Journal of Urology*, October, 1951) state that in 1949 Gahagan and Reed reviewed the literature and found only 106 cases of squamous-cell carcinoma of the renal pelvis, of which 13 were their own. The present authors describe 15 cases, of which four with associated calculi are described in detail, while the rest are summarized. They state that preoperative diagnosis is very difficult because of the insidious onset of this disease and the overshadowing features of infection and calculous disease. Evidence of metastases was found in nearly 90% of all the cases; hence the disease is a highly dangerous one. There were no "five-year cures" in this series. Undoubtedly chronic irritation and infection play an important part in the causation of the metaplasia from transitional to squamous neoplasia.

Urinary Incontinence after Radical Prostatectomy.

E. F. HOCK (*The Journal of Urology*, December, 1951) states that incontinence of urine after total prostatectomy for carcinoma presents a problem that, up to now, has not been solved. Various authors report an incidence of incontinence after this operation that varies from 12% to 50%. It has been claimed by Millin that the retropubic operation properly performed, even with total prostato-vesiculectomy, avoids the injuries associated with the perineal approach, and therefore allows avoidance of incontinence. The author's personal experience, however, has been different. He states that the first four cases in which the Millin technique was used resulted in one death, while in the other three cases the patients were incontinent. In four succeeding cases the author used a suprapubic sling, made from the medial edge of one rectus muscle, to pass under the vesicourethral anastomosis and support it. The sling goes up through the lowest part of the opposite rectus muscle and through its sheath, to which it is sutured. In three of these four cases there was some obstacle-formation by the sling, and urethral dilatation was necessary to allow free micturition, but in all four cases incontinence was avoided. The author considers that too much attention has been paid in the past to the external sphincter muscle as the controller of urinary outflow. He states that general urethral resistance is the main factor, and that this arises from the tonus of the urethra itself and of its sphincters and supporting structures. After total prostatectomy even an intact external sphincter may be inadequate to ensure good urinary control. The author recommends the mid-line vertical incision for the operation of retropubic total prostatectomy with routine support of the vesicourethral anastomotic region by means of a suprapubic sling.

Special Articles for the Clinician.

(CONTRIBUTED BY REQUEST.)

XXXVII.

TREATMENT OF THE COMMON COLD.

THE problem of the common cold is a perennial one, its importance far reaching, and its treatment, as ever, unsatisfactory as far as any specific measures are concerned. Of all human illnesses it is the most frequent, affecting young and aged alike, though the former have more colds than the latter. On an average, each individual in the community suffers from two or three severe colds a year. An occasional fortunate person appears to have a natural resistance to this disease, and escapes colds almost entirely. On the other side of the ledger are those in whom one infection seems to follow another in quick succession throughout the greater part of the year.

From a public health point of view, owing to the frequent absences from work and school that the common cold results in, the problem is of great magnitude. More man-hours are lost from work, and more morbidity in the community is created, from this disability than from any other single cause, with the rheumatic diseases, speaking in the widest terms, running a good second.

Before treatment is discussed, certain epidemiological and clinical features of the disease will be referred to briefly, as these form a necessary background to the approach of therapy.

The common cold, synonymously called "coryza", may be defined as a mild infectious disease, the chief manifestation of which is a catarrhal inflammation of the upper respiratory tract. It is generally accepted that a filtrable virus, of which there may be several strains, is primarily responsible for the disease, though the great majority of the more unpleasant symptoms and complications are due to micro-organisms, most of which are normal inhabitants of the mucosa like the *Streptococcus viridans* and *Micrococcus catarrhalis*, and other pathogenic bacteria like the pneumococcus, *Hæmophilus influenzæ*, *Streptococcus hæmolyticus*, and *Staphylococcus pyogenes*. These bacteria prolong the illness for a variable period, commonly seven to fourteen days.

The incubation period is short, usually one to three days, after which the usual initial symptoms are malaise and dryness of the throat, with sneezing, feelings of chilliness, and mild aching pains closely following. Nasal obstruction with discharge, at first watery and later muco-purulent, congestion of the eyes, and mild pyrexia are usual accompaniments.

In the majority of cases the inflammation extends to a greater or lesser degree from the nose to the nasal sinuses, pharynx and bronchi, and laryngitis may be a common event in some epidemics. Of the other relatively frequent complications may be mentioned *otitis media*, tonsillitis and pneumonia, and it is well known that the common cold may be the initiating factor in more serious complaints like meningitis, the reactivation of a quiescent tuberculous focus in the lungs, and heart failure in the elderly. To mention another condition, a stabilized diabetic state may be upset by this respiratory infection.

In the differential diagnosis of the common cold, the disease which presents most difficulties, on clinical grounds, is infection with influenza virus. It is not proposed to discuss in this article the distinguishing features of these two conditions, but influenza should also be borne in mind by the clinician when he is confronted with what appears to be "coryza".

Other conditions come to mind, and to name only a few of these, one must consider allergic rhinitis (hay fever), measles, rubella, pertussis, poliomyelitis, cerebro-spinal meningitis, atypical pneumonia and malaria, when in an endemic area of this disease.

Predisposing Causes and Initiating Factors.

Certain predisposing causes and initiating factors may operate in the production of the common cold, other than the actual virus itself. Of these the following may be mentioned.

1. Chilling of the body, dampness, exposure to draughts, and cold, wet feet. A great many people relate the onset of their colds to such factors. A possible explanation of this may lie in the work of Mudd and Grant, who, in 1919, showed that chilling of the body results in reflex vasoconstriction in, amongst other sites, the mucosa of the nose and pharynx. This may lay the mucosa open to infection by the virus, or it may even be the means whereby a latent virus in a symptomless carrier is reactivated. There is also some evidence to suggest that radiators used in closed stuffy atmospheres may predispose to this complaint.

2. Individual susceptibility. The variable attack rate has been referred to. Obviously the natural immunity of the person concerned is of paramount importance in this direction. As a general rule, resistance to the common cold is short-lived and lasts approximately three months.

3. Carriers. It is probable that many persons act as symptomless carriers, and that one of a number of factors, for example, chilling, may cause such a person to develop a cold. An analogy may be drawn in the way in which the common cold itself initiates *herpes febrilis* in a proportion of people. These healthy carriers serve as a great pool for dissemination of the cold virus within the community.

4. Lowered state of general health. It is reasonable to assume that factors like fatigue, malnutrition, anæmia, chronic infection in the nose, sinuses and pharynx, and other concurrent diseases, may all predispose an individual to infection with the virus of the common cold.

5. Seasonal factors. Colds may occur at any time of the year, but they are especially prevalent in the seasons in which there are considerable fluctuations in temperature, allied with dampness, for example, the autumn, winter and early spring. There is, however, no constant relationship between these factors and the incidence of colds.

6. Allergic factors. These are debatable, but evidence has been put forward that they may act in initiating an attack of this disease. Further reference will be made to this in the discussion on treatment.

7. Crowding. There is no question that restaurants, theatres, public transport, schools, and the like furnish that factor which is perhaps the major one in promoting an epidemic of colds in a community, namely, close contact.

Method of Spread.

It is a matter of common experience that colds are highly contagious. The great majority are "caught" from those who are incubating the disease, or who are in the first few days of their active infection. Others gain their infection from a symptomless carrier.

The three main means of spreading the disease are: (*a*) By droplet infection, through sneezing and coughing. (*b*) Through the medium of infected handkerchiefs. This is regarded as a very common method of spread. (*c*) By the hands of an individual with the infection. Eating and drinking utensils no doubt also play their part in the dissemination of the virus.

Treatment.

No specific treatment has yet been discovered. Present-day therapy is largely directed towards symptoms as they arise. Prophylactic measures will be discussed later.

There can be few illnesses for which so many varied remedies have been held up as a "cure", as much, if not more so, by the uncritical public as by practitioners themselves. There are some who will advocate a certain line of treatment as an infallible cure; others adopt an attitude of therapeutic nihilism. Between these two extremes lies the common-sense answer.

A household adage is that an untreated cold lasts a fortnight, whereas with treatment it lasts fourteen days. In milder epidemics, this period may be reduced to seven days. With the broadening spectrum of viricidal antibiotics, we may dream of a true cure in the future.

There are few who would disagree that the best treatment for the common cold in its earliest phases is to seek the warmth of a comfortable bed, but this ideal, for economic and other reasons, can seldom be carried out. Bed rest should be strongly advised for small children and the elderly, likewise for those with tuberculous infection of the lungs, latent heart failure and nephritis, and for those with any significant degree of pyrexia.

The traditional hot whisky and lemon, with ten grains of aspirin, on retiring to bed has much to recommend it for adults in the initial phases of their infection. Aspirin, taken every four hours, in dosage appropriate to the age, makes many people feel more comfortable, and in some seems to

shorten the period of their illness. Dover's powder may conveniently be combined with this drug. Many homes can vouch for the help gained by immersing the feet in a hot mustard bath, though they are not to know that this may have some scientific foundation through reflex vaso-dilatation.

If pharyngitis is present, the aspirin may, with benefit, be gargled and swallowed, and penicillin lozenges appear to benefit a proportion of people. Massive dosage with ascorbic acid has been advocated as a means of aborting a cold, providing it is taken in the earliest phases. This may still have some advocates, but there is no scientific foundation that it is of any specific value.

Other drugs which have been recommended for use in the earlier phases of the illness are quinine, papaverine, atropine and codein, but it is very doubtful whether any of these have any real effect on the course of the disease, though they may make the individual feel more comfortable. An old tried mixture for an adult is *Liquor Quininæ Ammoniatus*, *Tinctura Opii Camphorata*, *Spiritus Ammoniæ Aromaticus*, one drachm of each, in half a tumbler of water. This may be repeated every four hours, and is of symptomatic value.

In most persons the effects of secondary bacterial invasion begin to manifest themselves within two or three days of the onset of the cold. By this time the mucosa of the nasal sinuses, pharynx, trachea and bronchi have been involved, with the production of such symptoms as pain in the head, nasal obstruction, sore throat, hoarseness, substernal pain, and an irritating cough, which, in the earlier stages, is so often non-productive. It is when these complications have ensued that other remedies can be employed with advantage.

A steam inhalation of menthol, eucalyptol and friar's balsam remains one of the best prescriptions, used two or three times a day, and preferably when the patient is not going out into the cold air immediately afterwards.

There are many compounds on the market whose action is to shrink the nasal mucosa. This makes the patient more comfortable by opening up the airways and encourages drainage of secretions from the nose and sinuses. Of these compounds, one has a preference for "Neo-Synephrine" hydrochloride drops, 0·25% aromatic in Ringer's solution, to be used three or four times a day. In the same category, a nasal ointment containing five grains each of menthol and chlorbutol, three minims of eucalyptol, two minims of liquefied phenol, and yellow soft paraffin to one ounce is very useful, especially when applied at night time. Used as a nasal ointment, and also rubbed into the skin of the front of the neck and chest, some such preparation is very common therapy for children in any household.

Many find a pocket inhaler like those containing amphetamine sulphate convenient to use, though this drug should not be employed without some caution as to too frequent dosage, and it is probably best avoided in the young, elderly, and those with cardiac disease or hypertension.

Two of the most distressing complications of the common cold are tracheitis and bronchitis. For the former, rest of the voice and steam inhalations are recommended, and for the latter a throat lozenge and some suitable cough mixture. In the earlier phases, a linctus containing codein, or heroin in small dosage if the spasms of coughing are very distressing, is best employed, and, at a later date, when there is more muco-purulent secretion, a traditional cough mixture like *Tincturæ Camphoratæ Compositæ* minims 20, *Tincturæ Ipecacuanhæ* minims 10, *Oxymellis Scillæ* minims 30, and water to half a fluid ounce, taken four-hourly, will satisfy the demands of the patient, though its curative value may be questioned.

Streptococcal tonsillitis, *otitis media* and pneumonia must obviously be treated, and at an early stage, if they occur, and it is in these that the sulphonamides and antibiotics, particularly penicillin, should be used in full dosage. If it is considered that an atypical pneumonia has supervened, aureomycin or chloramphenicol in suitable dosage should be prescribed. Other complications must be treated on their own merits.

The haphazard prescribing of the sulphonamides or antibiotics in the early stages of a common cold, although not an unusual practice, is to be deprecated for a number of reasons which it is not proposed to discuss here. A more rational approach to the treatment of this disease should be employed by practitioners, remembering that one of the first dictums in any form of treatment is that it should do no harm. In regard to penicillin, I have found the intranasal application of penicillin drops of value when the secretion has become muco-purulent.

Recently, the antihistamine group of drugs have had their vogue in the treatment of the common cold. Their use was promoted on the assumption that some of the manifestations, especially the early ones, of coryza are of allergic origin. There was at first a tremendous demand by the public for these drugs, especially from the drug stores in the United States of America. Although there are still firm advocates of this form of therapy, properly controlled experiments have shown that little if any real benefit can be expected from this group of drugs. It is obvious that success will usually be obtained when a truly allergic rhinitis like hay fever has been mistaken for the common cold.

Prophylaxis.

There are no specific preventive measures against the common cold. An anti-viral vaccine may be a dream for the future. General hygienic methods, segregation of sufferers, which is seldom practicable and less often employed, avoidance of contacts and of closed places like picture theatres when an epidemic is on, have obvious advantages.

Unnecessarily heavy, or too closely woven garments, especially in the colder weather, may predispose an individual to colds. It is thought that this may be brought about by diminishing the ability of the skin to adjust itself to rapid changes of environmental temperature. Wet shoes and socks should be changed as soon as possible.

Those in a good state of general health appear less likely to contract frequent colds, though this does not by any means always apply. One has only to have the humiliating experience of "going down" with coryza within forty-eight hours of returning to city life after an invigorating holiday in the snow to realize the truth of this.

Although vitamin *A* is an anti-infective factor, as a preventive measure the regular taking of mixed vitamin preparations, especially during the "cold seasons", has little to recommend it on scientific grounds. Nevertheless, many members of the public attribute their relative freedom from colds to such a practice. If there is a field for such prophylactic therapy, then it would seem that the administration of vitamins to children holds the most chance of success, and their prescribing may at least placate a mother exasperated and worried by her child's frequent colds.

An unhealthy state of the upper respiratory tract should be corrected. In children, especially, the removal of tonsils and adenoids should be considered whenever frequent colds are associated with definite disease in this lymphatic tissue, and the same principle applies to the surgical treatment of nasal deformities and chronic sinus infection.

The use of prophylactic vaccines to combat or minimize the effects of secondary invading organisms in the common cold has been on trial for many years. The Status Report (1944) of the Council on Pharmacy and Chemistry and the Council on Industrial Health of the American Medical Association concluded that: "Vaccines for colds cannot be recommended for routine administration to industrial groups or to individuals." Nevertheless many persons to whom vaccines are administered speak of the benefit they derive therefrom, and do not worry about the scientific question of cause and effect. For those who experience frequent and incapacitating colds, my practice is to recommend vaccine therapy with guarded optimism. Faith springs eternal, but the fact that there are many who, of their own volition, report back regularly each year for another course of injections would appear to justify their use in such individuals.

In Australia, the usually recommended time for the administration of these vaccines is in March or April. The "Mixed Coryza Vaccine", put up by the Commonwealth Serum Laboratories, is a suitable one for routine use, the dosage recommended being, for an adult, 1·0 millilitre of (*a*) strength as an initial dose, followed by 0·5 millilitre of (*b*) strength, and then by 1·0 millilitre of (*b*) strength, the interval between injections being five to seven days. Theoretically, an autogenous vaccine is more suitable, but in practice it is seldom used. Oral vaccines are mentioned, to be condemned.

In mass protection in industry, and in closed communities as in theatres, schools and the like, the possibility of minimizing dust, which it is known can contain viruses and other bacteria in large numbers, especially during epidemics, has been attempted by the oiling of floors, sunning and cleansing of blankets, and such measures. The practical application of these methods offers difficulties, and the beneficial results therefrom are as yet not defined. The wearing of masks covering the nose and mouth of people

in such communities is possibly a prophylactic ideal in this disease, and should most certainly be employed by the nursing mother. Discharge from the nose and throat during the first forty-eight hours of infection is highly infectious, and in any household handkerchiefs, pillow-cases, and other materials likely to be soiled should ideally be soaked in disinfectant. During the course of a cold, the use of paper handkerchiefs that can be burnt immediately after their use is a sound practice, as is also the washing of the hands before eating.

Finally, for those interested in this disease, and surely that must include us all, attention is drawn to the excellent article, "The Natural History of the Common Cold", by C. H. Andrewes, which appeared in *The Lancet*, Volume I, 1949, page 71. The work reported was carried out in the Common Cold Research Unit, Harvard Hospital, Salisbury, Wiltshire, and the author concludes that the explanation of the ubiquitous features of this disease as regards transmission, susceptibility to infection, incidence in the community and epidemics, is, although not proven, in harmony with a virus infection.

C. B. SANGSTER,
Adelaide.

Medical Societies.

MELBOURNE PÆDIATRIC SOCIETY.

THE monthly meeting of the Melbourne Pædiatric Society was held on Wednesday, June 11, 1952, at the Children's Hospital, Melbourne.

Thyroid Enlargement in the Newborn.

DR. MURRAY CLARKE presented the case report of a newborn infant with a sporadic congenital thyroid enlargement. The case was described as of interest because it was a rare condition and one in which the exact mechanism of enlargement of the gland was obscure.

Dr. Clarke said that he had first seen the baby two and a half hours after delivery, when it presented a monstrous sight. A huge collar filled the space between the chin and thorax, and the neck was hyperextended. The face, ears and lips were swollen and deeply cyanosed, whilst the eyes were closed, the eyelids being very œdematous. The baby was breathing with great effort. The collar-like swelling, which consisted of two lobes connected across the midline, extended up to the ears. Lobules of firm consistency were present, but in the main the masses were surprisingly soft, with the consistency of a cystic hygroma.

It was apparent that the child was being asphyxiated by the band of tissue around its neck, but it was not so obvious why a tumour with so little tenseness could cause so great an obstruction. As it was possible to outline the lower rounded border of the tumour and raise it from behind the sterno-clavicular region, it was not thought likely that a retrosternal extension caused the obstruction. Accordingly, immediate tracheotomy was decided upon as an urgent and life-saving measure, although the baby was a very poor "risk". Some difficulty was experienced by the anæsthetist, Dr. M. McClelland, in passing an endotracheal catheter, the vocal cords being also swollen and purple. However, when the catheter was passed, no appreciable change in cyanosis occurred. Numerous engorged and dilated vessels made tracheotomy difficult, and division of the thyroid isthmus was necessary. After tracheotomy the patient remained blue in spite of continuous oxygen therapy, and died six hours later. Further investigation revealed that the mother had no goitre but had been taking large doses of iodine in the form of potassium iodide for asthma for a very long time. Presumably that had caused an endocrine imbalance.

Dr. Clarke, in discussing the treatment of thyroid enlargement in the newborn, said that the prevention of ingestion of large quantities of iodide during pregnancy was important. In milder cases of dyspnœa and cyanosis, posture with head extended and pressure thus removed from the retrosternal region was sufficient to give relief. In a few weeks the gland usually returned to normal size with no symptoms of hypothyroidism. However, in the present case a goitre of the size described, with serious symptoms constituted a surgical emergency, the correct treatment of which was tracheotomy. The failure of relief of the cyanosis after the passage of the endotracheal tube should have indicated that the cyanosis was not from an upper respiratory obstruction but from atelectasis.

DR. ALAN WILLIAMS described the morbid anatomy. He said that the thyroid gland was very large, weighing forty-four grammes (normal one to two grammes). Apart from the size, the appearance was similar to the normal gland of the newborn. Microscopically, the gland was intensely cellular, with small acini and very scanty colloid. The cells lining the acini were columnar, and within the acini were numerous desquamated cells. The lungs were dark in colour and appeared to be totally collapsed. The only pink air-containing areas were in the anterior margins of the left upper and lower lobes. Microscopic examination revealed atelectasis, together with areas of apparent resorption collapse. The alveoli in the atelectatic areas were lined by nucleated cuboidal cells, whilst in other areas some bronchi were filled with desquamated epithelial cells.

DR. R. M. ROME described the obstetrical management of the case at the Women's Hospital, and demonstrated skiagrams. He said that the condition of congenital thyroid enlargement was suspected before the birth of the child. Radiological examination of the mother's abdomen two days before birth revealed that the fœtus was in the breech position with complete extension, the occiput almost touching the spine. Dr. Rome mentioned that at the Women's Hospital there had been nine previous cases in which the baby was shown by radiological examination to be in the same position but with the mouth open. At birth all the nine babies had been found to be normal. In the present case the skiagram of the baby with thyroid enlargement showed that the mouth was closed, and that feature had made a thyroid enlargement suspect.

Dr. Rome said that the baby had been born three weeks before the expected date. The mother had been taking potassium iodide, ten grammes three times a day, for asthma for two years before the baby's birth. However, a large number of women took iodide during pregnancy without the development of thyroid enlargement in the baby.

Dr. Rome asked whether alternative surgical measures, such as division of the thyroid isthmus or cervical fascia, could have been more successful. The baby had atelectasis and the prognosis was poor. Thyroidectomy was obviously impracticable.

DR. KATE CAMPBELL said that babies with congenital thyroid enlargement fell into two main groups. The first group was that in which mothers with no thyroid abnormality had been taking iodide for other purposes, such as asthma, when pregnant. The second group consisted of babies born to thyrotoxic mothers. There was a distinct difficulty in differentiating the condition from cystic hygroma, owing to the cystic feel, which was probably due to overlying œdema.

Dr. Campbell said that the condition was rare, and she had met with six cases only. Two of the cases, including the one reported by Dr. Murray Clarke, had been met with recently. In the other case the baby had been born to a mother who had been taking 0·5 to 1·0 grain of thyroid extract from the age of sixteen to twenty-eight years and had continued until she was six months pregnant. From that stage until the baby's birth she had been taking potassium iodide, ten grains three times a day. The baby was born with a firm thyroid enlargement but with no evidence of toxicity. Dr. Campbell said that she had seen the baby recently at the age of five and a half months and the thyroid was almost normal in size. Spontaneous regression to normal size was the rule according to literature on the subject.

Dr. Campbell said that she had not seen any babies with thyroid enlargement occurring because of thyrotoxicosis in the mothers. However, Dr. Kate McKay had seen three. If pregnant women with thyrotoxicosis were given thiouracil, the babies were normal unless myxœdema had been produced in the mother. In such circumstances, and also when the mother had been submitted to thyroidectomy for thyrotoxicosis some years before, the babies could be cretins. An interesting feature was that 12 of 13 cretins seen by Dr. Campbell in recent years had been females.

DR. H. N. B. WETTENHALL quoted two cases of congenital thyroid enlargement which he had managed in 1944. The mothers of both babies had had palpable thyroids, whose presence had remained unnoticed by them. Both women had been taking large doses of potassium iodide for years, one having taken ten grains three times a day for two years continuously, the other ten grains three times a day intermittently for four to five years. One of the infants had presented with a cystic swelling of the neck and recurrent cyanotic attacks. Gavage feeding was necessary, but spontaneous recovery occurred. The second baby had had a large tumour and severe cyanotic attacks, and had failed to survive. Autopsy revealed that the thyroid weighed 50 grammes, was wrapped around the trachea and enclosed the hyoid bone.

Dr. Wettenhall mentioned that the two babies together with two others with congenital thyroid enlargement, who were in the Children's Hospital in 1941, were males. He also said that Crotti had quoted thyroid enlargement of the newborn as being common in endemic areas. Skinner, in America, had given small doses of tincture of iodine (one to two minims per week) to mothers in endemic areas, and had claimed to have prevented the development of neonatal thyroid enlargement.

DR. T. DUDLEY HAGGER said that he had lived in an endemic area in New South Wales for several years and could confirm Crotti's observations. He had met with several cases of congenital neonatal thyroid enlargement. All the babies affected had recovered spontaneously or upon the administration of small doses of thyroid extract. Dr. Hagger said that he was of the opinion that pregnant women in endemic areas should be given iodides, but not in large doses, as they might stimulate thyroid enlargement in the infant. The administration of one to two grains of potassium iodide per week was probably sufficient. Dr. Hagger said that it would be unfortunate if small doses of iodides were discredited, as they were probably useful in preventing neonatal thyroid enlargement in endemic areas.

DR. JOHN COLEBATCH quoted two cases illustrating the problems of thyroid enlargement in the newborn in relation both to iodine therapy in the mother and to signs of apparent hypothyroidism in the infant. He referred first to the earliest case in Australian literature, described in 1948 by Hone and Magarey in THE MEDICAL JOURNAL OF AUSTRALIA, Volume II, page 524. The mother had been treated for thyrotoxicosis with thiouracil alone and had a perfectly normal delivery at term. The infant, a female, was cyanosed from birth, with signs of cretinism, and died within twenty-four hours, the thyroid gland being impalpable. At autopsy there was extensive atelectasis; the thyroid gland was enlarged sixfold and showed gross hyperplasia, vascular engorgement and acini lined with low columnar epithelium and devoid of colloid. Dr. Colebatch then described with illustrations a case in a patient currently under his care. The mother had been treated for mild thyrotoxicosis with thiouracil, 200 milligrammes daily, reduced to 100 milligrammes daily in the last trimester; she had also been given Lugol's iodine, four minims daily, from the fifth month. After a normal delivery at term the infant was subject to cyanotic turns during the first few days, due apparently to atelectasis. On the second day the infant was noticed to have a generalized enlargement of the thyroid gland, readily portrayed in photographs; she also had a thick protruding tongue, coarse features and thickened eyelids. No treatment was given. The signs suggesting hypothyroidism subsided early and the infant progressed normally, but the gland only slowly decreased in size. At the age of three months the gland was still visibly enlarged and the level of serum alkaline phosphatase was eight King-Armstrong units, which according to Talbot might indicate hypothyroidism.

DR. ROBERT SOUTHBY asked whether the atelectasis was primary or due to the tracheal obstruction, and mentioned that he had attended five thyrotoxic women who were pregnant, of whom one had been subjected to thyroidectomy during pregnancy. All the babies were normal.

Dr. Alan Williams gave a brief historical account of congenital neonatal thyroid enlargement. He quoted several cases in which the enlargement was apparently due to the administration of large doses of potassium iodide. He said that the histological appearances were similar in those cases in which autopsy or biopsy was carried out. The gland appeared normal with absent or minimal colloid. It had been suggested that iodides in large doses stimulated the anterior pituitary lobe to produce thyroid-stimulating hormone, which caused thyroid enlargement in the mother or the child or both.

Dr. Murray Clarke, in reply to Dr. Southby, said that as the cyanosis had persisted after an endotracheal catheter had been passed, it was probably not due entirely to the thyroid enlargement. The management of the patients in these cases included the use of posture in extension, continuous oxygen administration, and tracheotomy if necessary. Thyroidectomy was not advised, because of the usually spontaneous return to normal. There was also the danger of hypothyroidism.

Reticulosis.

DR. M. L. POWELL presented a girl, aged twelve and a half years, who had been admitted to hospital for investigation of pyrexia of unknown origin. She had been quite well until twelve months previously, when she had developed periods of fever, with temperature up to 103° F., lasting several days. At first these had been three to four weeks apart, but they had increased in frequency until now she was not afebrile for longer than two days. There had been no other symptoms to suggest a cause for the pyrexia, but she had been exposed to the risk of brucellosis. There had been pronounced anorexia and considerable weight loss.

On admission to hospital she was a thin, pale girl with a temperature of 102·4° F. and a smooth, symmetrical thyroid enlargement. The gland areas appeared normal, and neither liver nor spleen was palpable. Otherwise she seemed normal. Her hæmoglobin content was 9·7 grammes *per centum* and the blood picture was normal. The findings from blood culture, agglutination tests and Mantoux tests (with 1:1000 and 1:100 old tuberculin) were negative. A skiagram of the chest appeared normal. Serum calcium and phosphorus levels were normal.

The parents then pointed out that the onset of her fever had nearly coincided with the fracture of her humerus and that there had been several bouts of pain and swelling in the left shoulder since. They had noticed a deformity but had been assured that it was due to the fracture. Closer examination confirmed the deformity, which was above the fracture site, and a radiological survey of the skeleton was undertaken. That revealed cystic changes in the upper end of the left humerus, with cortical expansion and erosion, and pronounced bone reaction. Similar areas were discovered in the left clavicle, and partially collapsed thoracic and lumbar vertebræ were seen. Comparison with previous films suggested that the condition had been present for about twelve months, while questioning revealed that only minimal trauma had occurred when her arm was broken. Bone marrow smears were normal, but a biopsy of the humerus showed a granulomatous lesion containing histiocytes.

Dr. Powell said that the case represented an interesting variant of the usual species of pyrexia of unknown origin and also demonstrated the importance of examining the skeleton in such cases. Conditions to be considered in the differential diagnosis once the lesions in the bones were radiologically demonstrated would appear to be the following:

1. Chronic inflammation. Both syphilis and tuberculosis were most unlikely, as the bone appearances in no way resembled those in either disease, and the results of other tests were negative. A low-grade coccal infection associated with impaired blood supply due to a damaged nutrient artery at the time of fracture was a possibility, but the extraordinary absence of symptoms, especially night pain, the non-inflammatory appearance of the secondary lesions, and the absence of leucocytosis made such a diagnosis unlikely.

2. Malignant tumour of bone, such as osteogenic sarcoma or chondroblastoma. Early skiagrams showed a definite lytic or destructive process, but the fracture had healed or definite consolidation of bone had occurred lately; that was unlike the natural history of malignant disease of that nature.

3. Benign giant cell tumour. That was ruled out by the non-encapsulated appearance and the presence of lesions elsewhere.

4. One of the group of reticuloses. Letterer-Siwe's disease would appear unlikely because of the age of the child and the absence of rapid progression. Eosinophilic granuloma of an unusually diffuse type was a distinct possibility, even without evidence in the section of eosinophilic responses. Dr. Kaye Scott had suggested that the Hodgkin's type of reticulosis was a possible diagnosis, in the present case exhibiting a marked localization in one area (a feature of the disease), and that the temperature chart could well be exhibiting the Pel-Ebstein phenomenon. Dr. Scott had also suggested the use of nitrogen mustard in an attempt to control the cell proliferation by its specific action upon the nucleoprotein of the nuclei of the developing cells.

DR. ALAN WILLIAMS described the microscopic appearance of the biopsy specimen of the lesion in the humerus. He said that examination of the section showed vascular granulation tissue with numerous fibroblasts and mononuclear cells of the histiocyte type. It could be described as histiocytic granulation tissue, and the condition was probably a histiocytic reticulosis. The absence of eosinophile cells was not contrary to the diagnosis of eosinophile granuloma. Faber in 1941 had demonstrated that eosinophile cells could be found in some areas but not in others. There was not sufficient evidence to diagnose an inflammatory reaction.

DR. H. C. COLVILLE thought that the lesion could be a Brodie's abscess and suggested exploration.

DR. MURRAY CLARKE said, in reply to Dr. Colville, that when he had performed the biopsy neither pus nor necrotic bone was found. The appearance was like that of a blood cyst. On those findings he thought that an exploration would reveal no further information.

DR. KEITH HALLAM suggested that the condition could be Hodgkin's disease, as he had met with cases of Hodgkin's

disease indistinguishable from the case under discussion. A lymph gland biopsy might help.

DR. H. DOUGLAS STEPHENS suggested that the condition could be Ewing's sarcoma and might be sensitive to deep X-ray therapy.

Coarctation of the Aorta.

DR. G. L. GRIGG presented one of Dr. Powell's patients, a boy, aged ten years, who had been well until the day before his admission to hospital, when he complained of sudden pain in the left foot and was sent home from school. There was no history of injury or recent infection, but his doctor found that he had a temperature of 103° F. and an acutely tender and red ankle, and made a tentative diagnosis of rheumatic fever.

On his admission to hospital he had a temperature of 102·4° F. and a pulse rate of 120 per minute at the left wrist. There was no evidence of infection in throat or chest, but there was a small abrasion on the dorsum of the left foot, surrounded by an area like erysipelas. However, pain and tenderness extended deep into the tarsus and were aggravated by movement. His apex beat was forceful, being two and a half inches from the mid-sternal line in the fifth left intercostal space, and the heart sounds were clear, but a moderate systolic bruit was heard at the apex, at the left border of the sternum, beneath the left clavicle, and in the interscapular region. The pulse was forceful in the neck but was not detected at the right wrist or in the legs. The blood pressure was 180 millimetres of mercury, systolic, and 130 millimetres, diastolic, in the left arm, but could not be recorded elsewhere. No abnormal vessels were seen or felt in the back.

A diagnosis was made, first, of coarctation of the aorta with the right subclavian artery arising from the descending aorta and, second, of unrelated cellulitis of the foot. Subsequent X-ray examinations, including angiocardiography, confirmed the diagnosis of congenital heart disease, but failed to reveal any abnormality in the foot. Blood culture findings were negative, and chemotherapy had very little effect; the pain and fever gradually subsided over three weeks, but the dorsum of the foot was still œdematous. The lesion was now believed to be due to an embolus arising from the distal end of the coarctation, and early operation was deemed advisable.

Dr. Grigg made reference to the embryology of the condition and showed explanatory diagrams.

DR. L. P. WAIT agreed that the lesion of the foot was embolic. He had met with a similar case, which had proved to be due to an embolus.

Cœliac Syndrome due to Tuberculous Enteritis.

DR. HOWARD WILLIAMS showed a patient, aged ten years, who had contracted a primary tuberculous infection from her father at the age of two years and had then, from the age of three to eight years, had symptoms and signs of a severe cœliac syndrome. Treatment with streptomycin had resulted in excellent progress over the past twenty months. The patient was the third baby of apparently healthy parents. Pregnancy and labour had been normal, and the birth weight was six and a half pounds. The other two children were well and healthy. Progress was rather slow and tedious over the first two years, as the mother was nervously exhausted and the child difficult to manage and feed. At the age of two years the child weighed 21 pounds. Her father, who had enlisted in the armed services, was found to have pulmonary tuberculosis, and the child was admitted to the Children's Hospital in March, 1944, at the age of two years and one month, for investigation as a contact. There were no symptoms of an infection, but the Mantoux test result with 1:1000 old tuberculin was positive, and radiological examination of the chest showed collapse of part of the middle lobe and pectoral segment of the upper lobe of the right lung with displacement of the heart and mediastinum to the right. Culture of the fasting gastric contents did not yield a growth of *Mycobacterium tuberculosis*. As the child had no symptoms or increase in temperature and had gained two pounds in weight while in hospital over a period of six weeks, she was sent home. Her stools were normal. She made satisfactory progress over the next year and when aged three years weighed 28 pounds.

At the age of three years she insidiously became ill. Her appetite, which was never very good, failed. Her stools were noted to be rather loose and offensive, she complained at times of a "sore tummy", and her weight remained stationary. Gradually her abdomen became distended. At the age of five years a diagnosis of cœliac syndrome, possibly due to *tabes mesenterica*, was suggested, owing to the two years' history of anorexia, abdominal discomfort, loose watery offensive stools, wasting, distension of the abdomen and failure to gain weight. Her weight at that stage was only 28 pounds and her height three feet. Treatment with a low-fat, low-residue, light protein diet and injections of liver was carried out by the family doctor over the next two and a half years without any improvement in her symptoms or any gain in weight.

In September, 1949, an aggravation of the symptoms, together with the passage of blood-stained mucus, was responsible for her admission to the Children's Hospital. Examination of the child disclosed a very stunted, emaciated, pale, ill child with a distended abdomen, which measured 23 inches in circumference. Blood examination showed microcytic hypochromic anæmia, the hæmoglobin value being 9·0 grammes *per centum*. The Mantoux reaction with 1:1000 old tuberculin was positive, and radiological examination of the chest showed a little calcification in the pectoral segment of the upper lobe of the right lung, with increase in right hilar shadow and a shift of the heart and mediastinum to the right. Radiological examination of the abdomen disclosed no calcified glands. The epiphyseal development of the long bones was normal for the child's age. Her blood pressure was normal, and the urine was clear of albumin, cells and casts. She passed three or four loose offensive stools with some streaks of blood and mucopus; culture and microscopic examination disclosed no pathogenic organisms or amœbæ.

Fat balance studies carried out over three days showed that she had absorbed over 90% of a daily intake of 40 grammes of fat. Sigmoidoscopic examination showed a stricture in the rectum one and a half to two inches inside the anus, the central lumen admitting the tip of a medium-sized pair of Spencer Wells forceps. A diagnosis was suggested of rectal stricture either due to tuberculous infection or of congenital ætiology with secondary ulcerative colitis, but histological examination of the mucous membrane at the site of the stricture and gastric culture and culture of the stool for *Mycobacterium tuberculosis* failed to confirm the diagnosis of a tuberculous lesion. Treatment by dilatation of the stricture together with oral administration of sulphaguanidine and streptomycin over a period of six weeks produced slight improvement; the child gained three pounds in weight and was sent home to continue treatment by dilatation of the stricture together with intermittent sulphaguanidine therapy.

Over the next nine months the child slowly lost what little gain had been made; she remained listless and had no appetite, and the loose, offensive, porridge-like stools, with intermittent blood-streaking, persisted. In August, 1950, her general condition had so deteriorated that she was readmitted to hospital, weighing only 27 pounds and measuring in height only three feet three and a half inches at the age of eight and a half years. The findings on physical examination were identical with those of a year earlier. Sigmoidoscopy showed a granulating red area in the rectum at the site of the stricture and above this an ulcerated, acutely inflamed, œdematous mucous membrane as far as the recto-sigmoid junction. The child had a low-grade increase in temperature (99° to 100° F.) at that stage.

Dr. Williams said that Dr. J. G. Whitaker in consultation had decided to explore the child's abdomen with the possible object of "short-circuiting" or effecting drainage of the ulcerated colon. Laparotomy disclosed multiple patchy granulating lesions of the colon and three in the terminal part of the ileum, together with some calcified enlarged mesenteric glands. The changes were macroscopically those of patchy tuberculous enteritis and adenitis. A biopsy of the peritoneal granulation tissue of one of these lesions disclosed merely chronic inflammatory tissue. Culture of the stool for tubercle bacilli was also unsuccessful in proving the lesions to be tuberculous. However, streptomycin, 450 milligrammes daily by injection, and para-aminosalicylic acid, three grammes daily by mouth, were given with a most gratifying and remarkable result, which left little doubt that the lesions were due to tuberculous enteritis. During the next seven weeks her appetite rapidly became normal and she gained nine pounds in weight. Administration of streptomycin was continued with para-aminosalicylic acid for a further four months, during which time she gained a further seven and a half pounds in weight and grew one and a half inches in height. In spite of the dramatic general improvement and weight gain, the loose, porridge-like motions persisted and many contained streaks of blood.

In April, 1951, she was sent home clinically well, but her abdomen was still distended, her bowel motions were rather loose and frequent, and her colon was still hyperæmic and œdematous and had a few small ulcers. It was considered that she had low-grade, non-specific colitis, but that any tuberculous lesions had ceased to be active. During the next year she made steady progress and gained a further

10 pounds in weight and five inches in height. Her appetite at present was excellent, her energy was abounding, and she was passing two normal bowel motions each day.

Dr. Williams, in conclusion, said that there were a number of lessons to be learnt from a study of the patient. The first was that every child with a cœliac syndrome should be most carefully investigated to exclude any organic disease. The second was the difficulty in establishing a diagnosis of tuberculous enteritis in his patient, as the results of bacteriological and histological examinations were inconclusive. The third was the extreme degree of wasting and cessation in growth manifested by the child. She had failed to grow for almost six years in both height and weight, and yet over twenty months after treatment she had gained 27 pounds or doubled her weight and had grown six inches in height.

DR. DOUGLAS GALBRAITH reviewed various features of the cœliac syndrome. He commented on the presence of coarse hair on the limbs and downy hair on the body of the child, and queried this as a physical sign of malnutrition.

DR. V. L. COLLINS asked if there was any explanation of the steatorrhœa.

Dr. Howard Williams, in reply, said that there was no true steatorrhœa. A fat balance estimation was made and 90% of the fat given was found to be absorbed. Microscopically there were a few fat globules only present.

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

FROM ALEXR. McCLEAY TO DR. FRANCIS MORAN.[1]

Colonial Secretary's Office,
31 December, 1831.

Francis Moran, Esq., M.D.,
George Street,
Sydney.

Sir,

I have the honor to acknowledge the receipt of your letter of the 29th September last to the late Governor, representing that your assigned servants, named as per margin, who had been sent to Newcastle Hospital, the former with a "simple ulcer", and the latter with "simple rheumatism", were discharged therefrom after a long period of time, and in a much worse condition than when admitted, owing to the improper treatment received at the Hands of Mr. Surgeon Brooks. I am directed by the present Governor, to whom the matter has been submitted, to inform you that it appears Sullivan was labouring under "Venereal Disease" when he was admitted into Hospital, which complaint he himself states he concealed from you, and that the Treatment of this Man by Mr. Brooks has been stated by competent Medical Persons to have been perfectly appropriate to the Disease with which he was afflicted. Sullivan is now in the General Hospital Sydney under the usual remedies for Venereal Complaints.

With respect to Bellingham, whose Disorder appears to have been "Paralysis", I am further directed to acquaint you, that after ineffectually receiving proper attention in Newcastle Hospital for that Complaint for 5 months, he was forwarded to Sydney as an "Invalid" and thence to the Invalids Depot at Port Macquarie.

I have, &c.,
ALEXR. McLEAY.

Correspondence.

SLEEP.

SIR: The editorial of THE MEDICAL JOURNAL OF AUSTRALIA of August 16 refers to the possibility of an "anthology of sleep" in world literature, and it is remarked how bulky a volume such an anthology would be. Perhaps the writer would be interested to know that an "anthology of sleep" was published in 1942 by Readers Union, Limited, of London, by arrangement with Faber and Faber. It is entitled "Behold This Dreamer" and was edited by Walter de la Mare. The number of pages in the book is about 700, and the writers represented range from Leonardo da Vinci to Chekov, from Chaucer to Dorothy Wellesley. It is one of the most interesting anthologies ever prepared.

Yours, etc.,
HERBERT EARNSHAW.

Wickham Terrace,
Brisbane, B.17,
August 20, 1952.

[1] From the original in the Mitchell Library, Sydney.

Post-Graduate Work.

THE MELBOURNE PERMANENT POST-GRADUATE COMMITTEE.

PROGRAMME FOR OCTOBER, 1952.

Country Courses.

Bendigo Post-graduate Course.

ON October 11 a post-graduate course will be held at Lister House, The Northern District School of Nursing, Rowan Street, Bendigo, with the following programme: 2.15 p.m., Dr. Eric Price, "Club Feet, Knock-knees *et cetera*"; 4.15 p.m., Dr. R. H. O. Donald, "Asthma and Allied Diseases"; 8.15 p.m., Dr. D. Lawson, "Prevention of Known Causes of Cerebral Palsy".

Enrolments should be made with Dr. Warwick Rosenthal, Honorary Secretary, Bendigo Subdivision, British Medical Association, 32 View Street, Bendigo (telephone 477). The fee is £1 11s. 6d. for the course or 10s. 6d. per demonstration.

Horsham Post-graduate Course.

On October 4 and 5 a post-graduate course will be held at the Horsham Base Hospital, with the following programme: Saturday, 3 p.m., Dr. M. L. Powell, "Child with Persistent Cough"; 8 p.m., Dr. A. R. Wakefield, "Skin Replacement in Emergency Surgery". Sunday, 10 a.m., Dr. John McLean, "Blood Dyscrasia".

The fee for this course is £1 11s. 6d. or 10s. 6d. per demonstration, and enrolments should be made with Dr. A. L. Bridge, Lister House, Horsham.

Questions Concerning Poliomyelitis.

At the Bendigo meeting Dr. Price will be prepared to answer questions concerning poliomyelitis, and Dr. M. L. Powell will answer questions at Horsham.

Flinders Naval Depot.

Dr. R. Kaye Scott will lecture on "Pre-Malignant and Malignant Conditions of the Skin" at the Flinders Naval Depot on October 8 at 2.30 p.m. This is by arrangement with the Royal Australian Navy.

Naval, Military and Air Force.

APPOINTMENTS.

THE following appointments, promotions *et cetera* are promulgated in the *Commonwealth of Australia Gazette*, Number 57, of August 21, 1952.

NAVAL FORCES OF THE COMMONWEALTH.

Citizen Naval Forces of the Commonwealth.

Royal Australian Naval Reserve.

Rodney Gordon White (Lieutenant, Royal Australian Naval Volunteer Reserve) is appointed Surgeon Lieutenant, with seniority in rank of 1st October, 1946, dated 27th June, 1952.

AUSTRALIAN MILITARY FORCES.

Royal Australian Army Medical Corps (Medical).

The following officers relinquish the provisional rank of Captain and are transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (1st Military District) in the honorary rank of Captain, 2nd June, 1952:—QX700159 J. F. H. Graff and QX700160 D. E. Kleinig.

The following officers relinquish the provisional rank of Captain and are transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (2nd Military District) in the honorary rank of Captain:—NX700360 B. P. Scrivener, 27th May, 1952, NX700364 R. A. B. Vance and NX700361 J. B. Dillane, 4th June, 1952, NX700363 M. Pozniak, 12th June, 1952, and NX700367 J. Coleman, 17th June, 1952.

The following officers relinquish the provisional rank of Captain and are transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (3rd Military District) in the honorary rank of Captain:—VX700243 W. S. Sewell, 1st February, 1952, and VX700282 J. H. Leyden, 3rd June, 1952.

The following officers are transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (4th Military District):—Captains SX700053 R. Barnes, 28th June, 1952, and SX700054 W. I. Seith, 1st July, 1952.

The following officers are appointed from the Reserve of Officers, and to be Captains (provisionally), 2nd June, 1952:—Honorary Captains QX700162 J. D. N. Yelland and QX700161 W. K. R. Mackenzie.

To be Captains (provisionally).—NX700365 Harold Lindsay Thompson, 26th May, 1952, VX700283 Hugh Leigh Indian, and VX700284 Peter Percival Broughton, 31st May, 1952, NX700366 Benjamin Nathan Goodman and NX700367 John Coleman, 2nd June, 1952, NX700373 John Walter Skalla, 12th June, 1952, and QX700164 Leslie Strafford Stark and QX700165 Alan Robert Trist, 30th June, 1952.

Citizen Military Forces.

Northern Command: First Military District.

Royal Australian Army Medical Corps (Medical).—1/61768 Captain (Honorary Major) P. J. Monahan is appointed from the Reserve of Officers, 26th February, 1952.

Eastern Command: Second Military District.

Royal Australian Army Medical Corps (Medical).—2/191602 Captain F. G. J. Clarke is appointed from the Reserve of Officers, 19th May, 1952. 2/127030 Honorary Captain C. A. Shearer is appointed from the Reserve of Officers, and to be Captain (provisionally), 11th June, 1952.

Southern Command: Third Military District.

Royal Australian Army Medical Corps (Medical).—3/73792 Captain R. W. Webster is appointed from the Reserve of Officers, 27th May, 1952. *To be Temporary Major, 4th July,* 1952—3/82441 Captain D. C. Cowling.

Central Command: Fourth Military District.

Royal Australian Army Medical Corps (Medical).—4/32018 Captain B. L. Cornish is appointed from the Reserve of Officers, 20th May, 1952.

Western Command: Fifth Military District.

Royal Australian Army Medical Corps (Medical).—The provisional rank of 5/26466 Captain G. I. Howard is confirmed. 5/38323 Captain H. L. McCay is appointed from the Retired List, 30th May, 1952. 5/26057 Captain (provisionally) N. Same relinquishes the provisional rank of Captain and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (5th Military District) in the honorary rank of Captain, 20th June, 1952. 5/26466 Captain G. I. Howard is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (3rd Military District), 28th February, 1952 (in lieu of the notification respecting this officer which appeared in Executive Minute No. 74 of 1952, promulgated in *Commonwealth Gazette* No. 36 of 1952).

Tasmania Command: Sixth Military District.

Royal Australian Army Medical Corps (Medical).—To be Captains (provisionally), 8th July, 1952.—6/15407 Arthur Fenton Hargrave, 6/15408 John Nortin Taylor, and 6/15409 John McLeod Hunn.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps (Medical).

1st Military District.—To be Honorary Captain, 15th July, 1952—John Halford Grant.

2nd Military District.—The appointment of Honorary Captain S. S. Lantos is terminated, 26th March, 1952.

4th Military District.—To be Captain, 3rd July, 1952—John Arthur Reginald Miles.

ROYAL AUSTRALIAN AIR FORCE.

Medical Branch.

The following are appointed to commissions with the rank of Flight Lieutenant:—Alan Ingram Lane (266930), 23rd July, 1951, Eric John Hargreaves (277603), 21st March, 1952, Stephen Stacey Lantos (267960), 27th March, 1952, David Francis Cossar (257875), Marius Anthony Griffin (57664), Allen Offwood Howell (450731), 17th April, 1952, Douglas Edward Hoile (437270), 23rd April, 1952, Thomas Francis Spring (257877), 21st May, 1952.

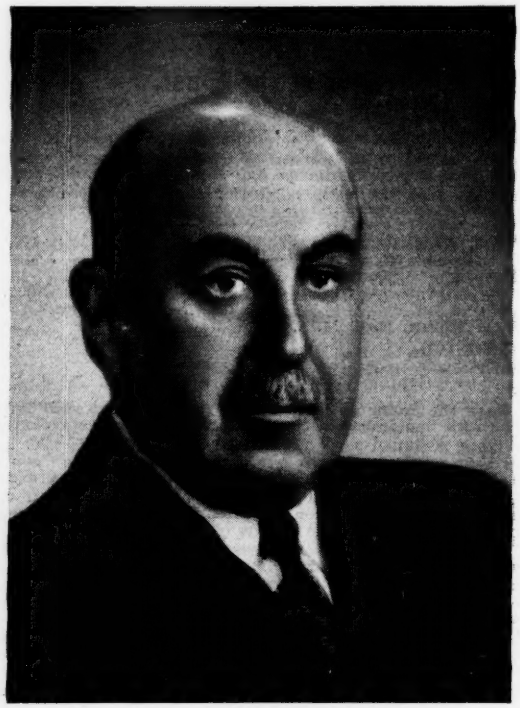
Flight Lieutenant F. H. James, M.C. (1454), is retired, 8th July, 1952.

Obituary.

CEDRIC KEITH COHEN.

WE are indebted to Dr. Conrad Blakemore for the following appreciation of the late Dr. Cedric Keith Cohen.

Dr. Cedric Keith Cohen, who died suddenly on Saturday, August 2, 1952, at his home in Wallaroy Crescent, Double Bay, was a well-known and well-loved ophthalmic surgeon in Sydney. He was sixty-two years of age, and his passing will leave an unfilled place amongst his friends and his colleagues.



He was the eldest son of the late Judge Cohen. Born in Brisbane, he was educated at the Sydney Grammar School, and after matriculation proceeded to the University of Sydney to study medicine. During his undergraduate years he was a prominent student at Saint Andrew's College. He graduated M.B. in 1914 and Ch.M. in 1915. After a few months as house surgeon at the Royal Prince Alfred Hospital he enlisted in the Australian Imperial Force and spent the next four years with the Royal Army Medical Corps in France.

Always interested in ophthalmology, he obtained his discharge from the army in London after the armistice and went as house surgeon to the Royal Westminster Ophthalmic Hospital in Chandos Street, where it then was. On completing his post-graduate studies he returned to Sydney to begin practice as an ophthalmic surgeon. Soon after this he was appointed to the honorary staffs of both Sydney and Lewisham Hospitals, and some years later, after the foundation of the Royal Australasian College of Surgeons, Cedric Cohen was made a Fellow.

The excellence of his work quickly became known, and right up to the time of his death he had a very busy consultant practice. He was forced to give up his honorary

appointment at Lewisham Hospital as the demands of his private practice became greater, but he continued on at Sydney Hospital and ultimately became the senior ophthalmic surgeon there. During the many years he was on the staff of this hospital he rendered sterling service both to his patients and to the hospital.

If one had to select an outstanding attribute, and Cedric Cohen had many, kindliness would possibly be the choice. Nothing was ever too much trouble if he felt he could render some service, great or small, to a friend or to a patient. As might be expected, this kindliness was soon appreciated by his patients, and this, coupled with his professional skill, made the size of his out-patient clinic at Sydney Hospital a byword; notwithstanding, Cedric Cohen was always last to leave the hospital.

Of his little spare time he devoted a good deal to Legacy, of which he was a member for twenty-three years, including a number of years as chairman of the medical committee, and he found time as well to become a Past Master of the Royal Empire Lodge. He was extremely fond of music, and incidentally a capable pianist himself. His friends will mourn the loss of an entertaining and lovable companion, whose ready help and clinical acumen will be greatly missed by his professional colleagues. Cedric Cohen was married twice and is survived by his two children, Bettine and Brian, and by his widow, Rewa.

ROY BADSON MULVEY.

WE regret to announce the death of Dr. Roy Badson Mulvey, of Bathurst, which occurred on August 15, 1952, at The Hague, Holland.

Congresses.

SIXTH INTERNATIONAL CONGRESS FOR MICROBIOLOGY.

THE Sixth International Congress for Microbiology will be held in Rome from September 6 to 12, 1953. The congress will be divided into the following sections: general microbiology (cellular structure, physiology *et cetera*); special microbiology (bacteria, fungi, viruses and rickettsiæ, protozoa, transmitting agents *et cetera*) applied to human, animal and vegetable pathology, and to hygiene, agriculture and industry; immunology; classification and nomenclature of microorganisms. Lectures on the most interesting contemporary problems of microbiology will be given at plenary sessions during the congress. A symposium will be held on the classification and biology of Actinomycetales. Any member attending the congress may present, in the different sections, communications on original scientific research.

Subscription to the congress entitles members to take part in the discussions, to receive the abstracts of the communications, to attend receptions and to take part in excursions and social activities. All correspondence to the President and Secretary of the Congress should be addressed impersonally as follows: *VI Congresso Internazionale di Microbiologia, Istituto d'Igiene "G. Sanarelli", Città Universitaria, Roma (Italia)*.

Australian Medical Board Proceedings.

NEW SOUTH WALES.

THE following have been registered, pursuant to the provisions of the *Medical Practitioners Act, 1938-1950*, as duly qualified medical practitioners: Cooke, Elizabeth, M.B., B.S., 1952 (Univ. Sydney); Curlewis, Brian Warren, M.B., B.S., 1952 (Univ. Sydney); Farrelly, Margaret Catherine Ethel, M.B., B.S., 1952 (Univ. Sydney); Ferguson, William John (junior), M.B., B.S., 1952 (Univ. Sydney); Galbraith, Donald Campbell, M.B., B.S., 1952 (Univ. Sydney); Hardy-Baker, Eric Edwin, M.B., B.S., 1952 (Univ. Sydney); Hughes, Walter James, M.B., B.S., 1952 (Univ. Sydney); James, Ronald William John Robinson, M.B., B.S., 1952 (Univ. Sydney); Jefferis, Robert William, M.B., B.S., 1952 (Univ. Sydney); Joseph, Anthony, M.B., B.S., 1952 (Univ. Sydney); Macarthur, Edward Barrie, M.B., B.S., 1952 (Univ. Sydney); Monaro, James William, M.B., B.S., 1952 (Univ. Sydney); Musgrove, Clement Hutton, M.B., B.S., 1952 (Univ. Sydney); Musgrove, John Dennison, M.B., B.S., 1952 (Univ. Sydney); Player, Henry Reginald, M.B., B.S., 1952 (Univ. Sydney);

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED AUGUST 16, 1952.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	..	2(1)	..	..	..	..	..	..	2
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	..	..	1	..	..	..	1
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	1(1)	..	..	..	..	..	..	1
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	..	8(7)	..	..	..	..	1	..	9
Diphtheria	7(4)	5(4)	7(5)	..	2(2)	..	..	..	21
Dysentery (Bacillary)	..	..	2(2)	..	2(1)	..	..	..	4
Encephalitis	1	..	..	2	..	..	..	..	3
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	1	..	..	..	..	..	..	1
Infective Hepatitis	..	1(1)	..	..	9(6)	..	..	..	10
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	1	..	1
Leptospirosis	..	..	..	..	..	..	..	..	..
Malaria	..	..	..	..	..	..	..	..	..
Meningococcal Infection	10(6)	3(1)	1(1)	1	..	1	..	..	16
Ophthalmia	..	..	..	..	..	..	..	..	..
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	5(1)	3(1)	1	17(11)	1	..	..	..	27
Puerperal Fever	1	..	..	..	..	..	..	..	1
Rubella	..	14(2)	..	..	1(1)	..	..	1	16
Salmonella Infection	..	..	..	..	1(1)	..	..	..	1
Scarlet Fever	16(11)	30(19)	11(6)	6(5)	..	4	..	..	67
Smallpox	..	..	2(2)	..	..	..	..	..	2
Tetanus	..	..	..	..	..	..	..	..	..
Trachoma	..	..	..	..	..	..	..	..	..
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	39(33)	19(13)	13(7)	10(6)	12(7)	4(1)	1	1	99
Typhoid Fever	1(1)	..	1	..	..	..	..	..	2
Typhus (Flea-, Mite- and Tick-borne)	..	..	..	..	1(1)	..	..	..	1
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

Radford, Gerald Sidney, M.B., B.S., 1952 (Univ. Sydney); Ramsay, Helen McGregor, M.B., B.S., 1952 (Univ. Sydney); Sinclair, Maxwell Patrick, M.B., B.S., 1952 (Univ. Sydney); Stacey, Noel Harrison, M.B., B.S., 1952 (Univ. Sydney); Woolcott-Turner, Margaret, M.B., B.S., 1952 (Univ. Sydney); Willoughby, Kevin James, M.B., B.S., 1952 (Univ. Sydney); Delany, Patrick Denis, L., L.M., R.C.P. (Ireland), L., L.M., R.C.S. (Ireland), 1940; Clayton, Cyril James Weston, L.R.C.P. (London), 1912, M.R.C.S. (England), 1912; Hamilton, Samuel, M.B., B.Ch., 1948 (Queen's Univ., Belfast), D.Obst., R.C.O.G., 1950; Foley, John, L.R.C.P. (London), 1950, M.R.C.S. (England), 1950; Maxwell, Aileen Nada, M.B., Ch.B., 1943 (Univ. New Zealand); Wilson, Dennis de Courcy, M.B., B.S., 1949 (Univ. Adelaide).

The following additional qualifications have been registered: Benedek, Stephen (M.B., B.S., 1946, Univ. Sydney), D.P.M., 1952; Billington, Brian Price (M.B., B.S., 1946, Univ. Sydney), M.R.A.C.P., 1952; Wooster, Gordon Bruce Roy (M.B., Ch.M., 1924, Univ. Sydney), Diploma in Psychiatry, 1928.

TASMANIA.

THE following have been registered, pursuant to the provisions of the *Medical Act*, 1918, as duly qualified medical practitioners: Davison, Alan, M.B., B.S., 1948 (Univ. Queensland); Ramsay, Frank Mitchell, M.B., Ch.B., 1948 (Univ. New Zealand).

QUEENSLAND.

THE following have been registered pursuant to the provisions of *The Medical Acts*, 1939-1948, as duly qualified medical practitioners: Shapiro, Ralph Abraham, M.B., B.S., 1952 (Univ. Sydney); Leslie, Peter William, M.B., B.S., 1943 (Univ. Adelaide); Donaldson, James Blair, L.R.C.P. and S. (Edinburgh), 1913, L.R.F.P.S. (Glasgow), 1913; Smith, Joseph Leslie, M.R.C.S. (England), 1936, L.R.C.P. (London), 1936; Mitchell, Duncan, M.B., B.Ch., B.A.O. (Queen's University, Belfast), 1939; Fish, Mervyn Thomas, M.B., B.S., 1950 (Univ. Melbourne).

The following additional qualification has been registered: Wark, Colin Campbell, F.R.A.C.S., 1952.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Bell, Peter Kenneth, M.B., B.S., 1951 (Univ. Sydney), 6 Ferdinand Street, Hunter's Hill, New South Wales.

Halliday, Jonathan Peter, M.B., B.S., 1951 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown, New South Wales.

Doyle, Evelyn Mary, M.B., B.S., 1945 (Univ. Sydney), 2 High Street, Hornsby, New South Wales.

The undermentioned have been elected as members of the New South Wales Branch of the British Medical Association: Auerbach, Egon, M.B., B.S., 1952 (Univ. Sydney); Barnett, John Sadler, M.B., B.S., 1952 (Univ. Sydney); Booth, Mollie, M.B., B.S., 1952 (Univ. Sydney); Chapman, Walter Raymond, M.B., B.S., 1952 (Univ. Sydney); Dinning, Graham Gordon, M.B., B.S., 1952 (Univ. Sydney); Galbraith, Donald Campbell (Flight Lieutenant) (Prov. Reg.), M.B., 1952 (Univ. Sydney); Gaynor, Brian Seymour, M.B., B.S., 1952 (Univ. Sydney); Hughes, Walter James (Prov. Reg.), M.B., 1952 (Univ. Sydney); Ilbery, Peter Leslie Thomas, M.B., B.S., 1952 (Univ. Sydney); Jolley, Amy Beryl, M.B., B.S., 1952 (Univ. Sydney); Monaro, James William, M.B., B.S., 1952 (Univ. Sydney); Musgrove, Clement Hutton (Prov. Reg.), M.B., 1952 (Univ. Sydney); Player, Henry Reginald (Prov. Reg.), M.B., 1952 (Univ. Sydney); Sinclair, Maxwell Patrick, M.B., B.S., 1952 (Univ. Sydney); Thomas, Alan Dixon, M.B., B.S., 1952 (Univ. Sydney); Turner, Margaret Woolcott, M.B., B.S., 1952 (Univ. Sydney); Vanderfield, Ian Roger (Prov. Reg.), M.B., 1952 (Univ. Sydney); White, Bruce, M.B., B.S., 1952 (Univ. Sydney); Williams, Earle John, M.B., B.S., 1952 (Univ. Sydney); Willoughby, Kevin James Joseph (Prov. Reg.), M.B., 1952 (Univ. Sydney); Yorkston, Neil James, M.B., B.S., 1952 (Univ. Sydney); Bear, Leonard Alexander, M.B., B.S., 1946 (Univ. Sydney); Coventry, Keith John, M.B., B.S., 1947 (Univ. Sydney); Fallon, Peter Claude, M.B., B.S., 1950 (Univ. Sydney); Gillespie, James Albon, M.B., B.S., 1951 (Univ. Sydney); Greenaway, John Moore, M.B., B.S., 1951 (Univ. Sydney); Szarota, Stanislaw, registered in accordance with the *Medical Practitioners Act*, Section 17 (1) (*c*), 1938-50.

Diary for the Month.

SEPT. 15.—Victorian Branch, B.M.A.: Finance Subcommittee.
SEPT. 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.
SEPT. 17.—Western Australian Branch, B.M.A.: General Meeting.
SEPT. 18.—Victorian Branch, B.M.A.: Executive Committee.
SEPT. 18.—New South Wales Branch, B.M.A.: Clinical Meeting.
SEPT. 23.—New South Wales Branch, B.M.A.: Ethics Committee.
SEPT. 24.—Victorian Branch, B.M.A.: Council Meeting.
SEPT. 25.—New South Wales Branch, B.M.A.: Branch Meeting.
SEPT. 26.—Queensland Branch, B.M.A.: Council Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178 North Terrace, Adelaide): All Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital: all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

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